Wheeler Steel & Truck Equipment, Inc.

22956 Highway 61 Morley, MO 63767 Phone: (573) 262-3545 Fax: (573) 262-3369

Owners Manual

2006-2007 STATE OF ILLINOIS
PARTS AND SERVICE MANUAL

Wheeler Steel & Truck Equipment, Inc.

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STANDARD WARRANTY POLICY

Wheeler Steel & Truck Equipment, Inc warrants products of its manufacture against defects in workmanship and material for a period of on year, from the date of shipment to the customer. In consequence of this warranty, any component part or parts of such products proving defective within the above specified time will be repaired or replaced F.O.B factory. Providing such parts are returned, transportation prepaid, to the factory and found defective by Wheeler Steel & Truck Equipment, Inc.

This warranty will not apply to any product which has been repaired or altered outside of Wheeler Steel & Truck Equipment, Inc factory in any way, so as in Wheeler Steel & Truck Equipment, Inc's judgment, to affect its stability or reliability, nor which has been subject to misuse or accident.

The obligations of Wheeler Steel & Truck Equipment, Inc under this warranty are limited to the replacement of defective parts. Such obligations are exclusive and in lieu of all other remedies, warranties, guarantees of liabilities, expressed or implied, with respect to each product delivered, hereunder, arising by law or otherwise (including without limitation any obligation or liability by Wheeler Steel & Truck Equipment, Inc arising from negligence or with respect to fitness, merchantability, loss of use, revenue, or profit, or consequential damages or injuries).

This limited warranty shall not be extended, altered, or varied except by a written instrument signed by Wheeler Steel & Truck Equipment, Inc.

Wheeler Steel & Truck Equipment, Inc assumes no responsibility for engines, electrical equipment, or any other equipment and accessories not manufactured by Wheeler Steel & Truck Equipment, Inc beyond the warranty of the manufacturer of such equipment or accessories.

All warranty work done on Wheeler Steel & Truck Equipment, Inc equipment must have prior authorization from Wheeler Steel & Truck Equipment, Inc along with a "**Return Goods Authorization"** number. All labor and parts issued by user for Wheeler Steel & Truck Equipment, Inc warranty without an authorization number and a signed authorization warranty form will be at the users own cost.

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ORDERING PARTS

Delays and errors can be eliminated when ordering instructions are followed correctly.

1. Place orders direct with Wheeler Steel & Truck Equipment, Inc/nearest dealer.
2. State Company name, address, and postal/zip code.
3. Give the exact model and serial number of the equipment/unit (stamped on the unit identification plate)
4. Furnish part number, description, and quantities required. *Note: An alpha designation in the Item ID column indicates a sub-component for that parent item. When placing parts orders reference the parent item to receive a complete assembly. Individual items can be ordered separately if required by ordering the alpha designated item number.*
5. Print or type order clearly.
6. Give specific shipping instructions.

22956 Highway 61
P.O. Box 295
Morley, MO 63767

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WARRANTY REQUEST PROCEDURE

All repairs considered for warranty that are performed outside of Wheeler Steel & Truck Equipment, Inc require prior written authorization from Wheeler Steel & Truck Equipment, Inc. Failure to obtain written warranty authorization prior to repairs may result in the rejection of the warranty claim. **To obtain warranty consideration one must provide all required Wheeler Steel & Truck Equipment, Inc with unit information including date of manufacture and serial numbers.** In most cases this information is easily obtained from the "Shipped Unit Tag" (located in most cases inside the driver's side door) and/or individual unit serial tag.

(A) To obtain Parts Warranty Consideration:

(1) Contact Wheeler Steel & Truck Equipment, Inc customer service to obtain a Return Goods Authorization (RGA) number. Any product arriving at Wheeler Steel & Truck Equipment, Inc without a RGA number will be rejected and returned to the sender at his or her own expense.
(2) Goods are to be shipped prepaid to Wheeler Steel & Truck Equipment, Inc, Morley, MO. **All items should be marked with the appropriate RGA number.**
(3) When a replacement item is shipped to replace a defective part for warranty consideration, the following steps will occur:
    i. An invoice will be generated for the value of the replacement item(s).
    ii. The defective part(s) must be returned (prepaid) to Wheeler Steel & Truck Equipment, Inc.
    iii. Upon receiving the defective part(s) Wheeler Steel & Truck Equipment, Inc will issue and process a Discrepant Material Report (DMR). Once the evaluation of the DMR report is complete and the parts are deemed warranty, a credit will be issued against the outstanding invoice. **If the part(s) are deemed Non-warranty the invoice will remain outstanding to be paid to Wheeler Steel & Truck Equipment, Inc.** Any part(s) to be returned to the customer will be at his or her own expense.

(B) To obtain Labor Parts Repair Warranty Consideration:

In the event that repairs are required outside of Wheeler Steel & Truck Equipment, Inc facility that may be considered for warranty, the following steps must occur. **Notification of Wheeler Steel & Truck Equipment, Inc customer service must take place prior to the start of any repairs.**

(1) Contact Wheeler Steel & Truck Equipment, Inc customer service to obtain a Warranty Claim Form (WCF) and warranty authorization number.
(2) Fill out all required WCF information and fax or mail the completed form to Wheeler Steel & Truck Equipment, Inc, attention Customer Service Department.
(3) Once the WCF report has been reviewed, warranty authorization will be granted or denied. **NOTE: Wheeler Steel & Truck Equipment, Inc warranty labor rates will apply unless specifically determined otherwise.** Any part(s) involved in a WCF request must follow the Parts Warranty Consideration procedures.

For Customer Service and/or Parts requests please contact:

Wheeler Steel & Truck Equipment, Inc
22956 Highway 61
Morley, MO 63767
Phone: (573) 262-3545
Fax: (573) 262-3540

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PERIODIC MATINTENANCE INSPECTION
DAILY INSPECTION AND LUBRIACATION

Daily inspection along with periodic preventive maintenance will reduce the chance of any major repairs and down time during equipment use.

1. Check the fluid level in the hydraulic oil reservoir. If the sight indicated low oil level, add the appropriate amount of the specified hydraulic fluid. **Cold Weather Operation:** All equipment is designed to operate with hydraulic oil minimally warm. During cold weather conditions, it is recommended that the truck be run at idle with the pump engaged and circulating the oil through the system before operating equipment.
2. Grease all required components:
   a. All plow harness sheave nipples
   b. All pump drive shaft nipples
   c. Front and rear tower sheave swivel blocks
   d. Wing extension arm nipples
   e. Front and rear tower guide tracks
3. Check all components for loose and/or missing fasteners, if required tighten and/or replace.
4. Visually inspect all battery terminals and electrical connections, wires, switches, etc. for signs of corrosion, wear, loose and/or broken connections, etc. At the beginning of each shift review all lighting accessories to ensure proper working conditions, immediately replace any broken or non-functioning bulbs and/or lenses.
5. Visually inspect all hydraulic connections and hoses for cracks and/or leaks. Rupturing hoses may produce a high-pressure stream of hot hydraulic oil.
6. Check all cables, chains and sheaves for excessive wear or damage.
7. Visually inspect plow and wing units. Check cutting edges and wear shoes. If cutting edge has excessive wear remove and rotate, or if required, replace. **CAUTION:** Do not allow cutting edge to wear down to mounting angle. Any wear to the mounting angle may affect the operation and safety of the equipment. Replacement is costly.
8. At the beginning of each shift visually inspect all caution and warning decals. All decals should be complete and legible. If decals are not legible, clean them. If cleaning the decals does not make them legible, install new decals.

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GENERAL OPERATING INSTRUCTIONS

1. The operator should familiarize himself with all equipment prior to operation. The in cab controls are placed at a comfortable reach of the operator, with an allowable amount of adjustment. If necessary, the controls can be adjusted for either driver or passenger use.
2. See cab control layout. All levers are clearly marked as to the equipment/function they control.
3. To raise the plow or wing, pull back on the appropriate control level, to lower the plow or wing, push the control level forward. **NOTE:** The in cab controls are proportional to the hydraulic valve, therefore the further the control lever is moved the faster the plow of wing will raise or lower.
4. Before putting any equipment into use, check for any worn, damaged or loose components, if necessary repair or replace. Listen for any unusual sounds, if necessary repair and/or replace worn or damaged parts.
5. Before operating any equipment be sure to read and fully understand all caution and safety warnings. Familiarize yourself and others with all caution/warning labels and their locations. Make sure all labels are complete and legible. Replace any labels that have become unreadable and/or missing. Replacement labels can be purchased directly from Wheeler Steel & Truck Equipment, Inc.

REGISTRATION OF EQUIPMENT AND WARRANTY INFORMATION

Before using equipment check for damage. Report any damage to equipment at once to Wheeler Steel & Truck Equipment, Inc. The warranty period becomes effective upon date of delivery of equipment unless other arrangements have been made with a Wheeler Steel & Truck Equipment, Inc distributor or Wheeler Steel & Truck Equipment, Inc. The information required to register the equipment may be found on the serial number tag secured to the equipment.

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A WORD ABOUT SAFETY

The equipment described in this manual is normally being operated in winter conditions with bad weather and snow & ice conditions. Due to these adverse operating conditions it is important that you the operator use good safety practices at all times to protect yourself, co-workers, and others when using the equipment.

It is not practical or possible to warn you about all the hazards associated with the operation and maintenance of this equipment. You use your own good judgment supplemented with the information found on the safety decals, instructions in this manual, your employer's safety programs, safety codes, local, state/provincial, and federal laws, rules and regulations.

When operating/performing maintenance on this equipment, trouble shooting equipment operations and loading or unloading the sanders/spreaders with material observe and obey all safety decals on the equipment and warnings listed in the manual. Failure to do this could result in serious injury or death to you or others.

Remember at all times that as the operator you are responsible for the safe operation of this equipment and responsible for the safety of others. Good safety practices not only protect you but also protect the people around you.

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CAUTION

1 – Do not use this equipment before reading and understanding the operation's manual.

2 – Do not lift dump body when truck is moving.

3 – The opening control of rear gate must be locked when truck is moving.

4 – The truck must be in a stable position before starting to lift the dump body.

5 – Do not tip on recently excavated ground or in filling ground if the soil was not properly compacted.

6 – When lifting or dumping, the user must in all time be in control of the operation.

7 – The rear gate must be released before starting to lift dump body.

8 – Nobody should stand in the cylinders operation area when in action.

9 – Before dumping, make sure nobody stands in the area.

10 – Before starting a spreading mechanism, make sure nobody stands near the spreader.

11 – Before starting a spreader, make sure that the outflowing gate is open.

12 – When the dump body is not in operation, it must at all times lay on the truck's frame.

13 – When truck is not in use, remove keys from ignition.

0820043 WHEELER STEEL & TRUCK EQUIP.

Wheeler Steel & Truck Equipment, Inc.

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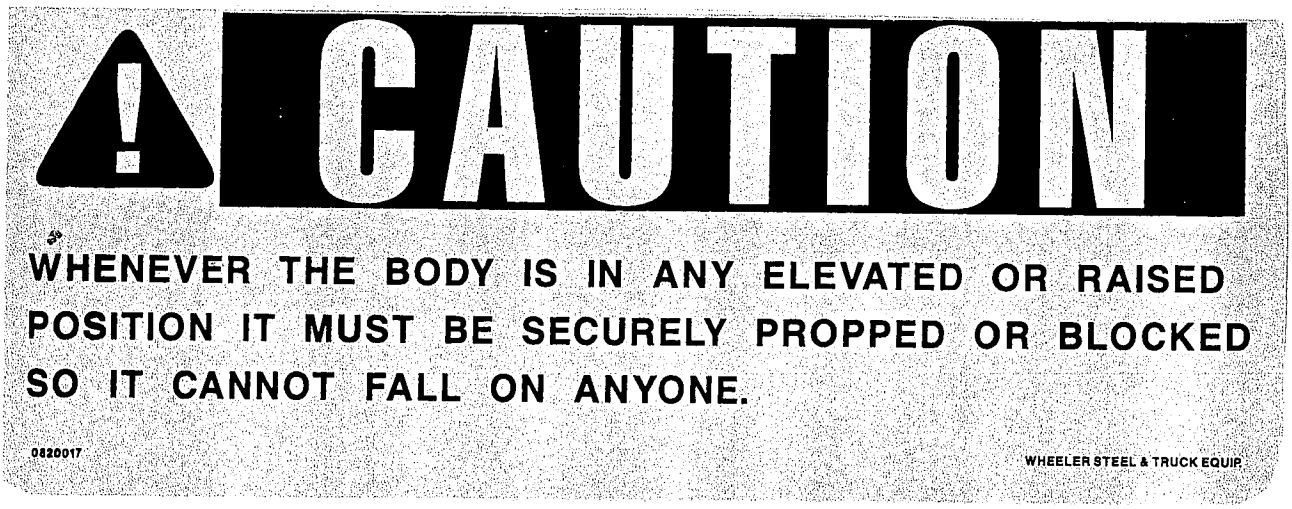
CAUTION
WHENEVER THE BODY IS IN ANY ELEVATED OR RAISED POSITION IT MUST BE SECURELY PROPPED OR BLOCKED SO IT CANNOT FALL ON ANYONE.
0820017
WHEELER STEEL & TRUCK EQUIP.

CAUTION
DO NOT USE THIS EQUIPMENT BEFORE READING AND UNDERSTANDING THE OPERATION AND MAINTENANCE MANUAL.
THIS MANUAL CAN BE PROVIDED BY ANY AUTHORIZED DEALER.
0820047
WHEELER STEEL & TRUCK EQUIP.

Wheeler Steel & Truck Equipment, Inc.

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CAUTION
MAKE SURE THAT DUMP BODY IS EMPTY BEFORE USING SAFETY PROP.
MAKE SURE THAT SAFETY PROP IS IN GOOD POSITION BEFORE SLIDING UNDER DUMP BODY.
SEE OPERATION MANUAL BEFORE USE.
0820045
WHEELER STEEL & TRUCK EQUIP.

CAUTION
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0820042
WHEELER STEEL & TRUCK EQUIP.

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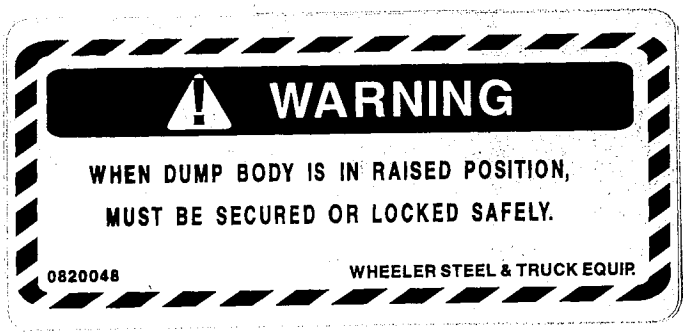
WHEELER STEEL & TRUCK EQUIP.



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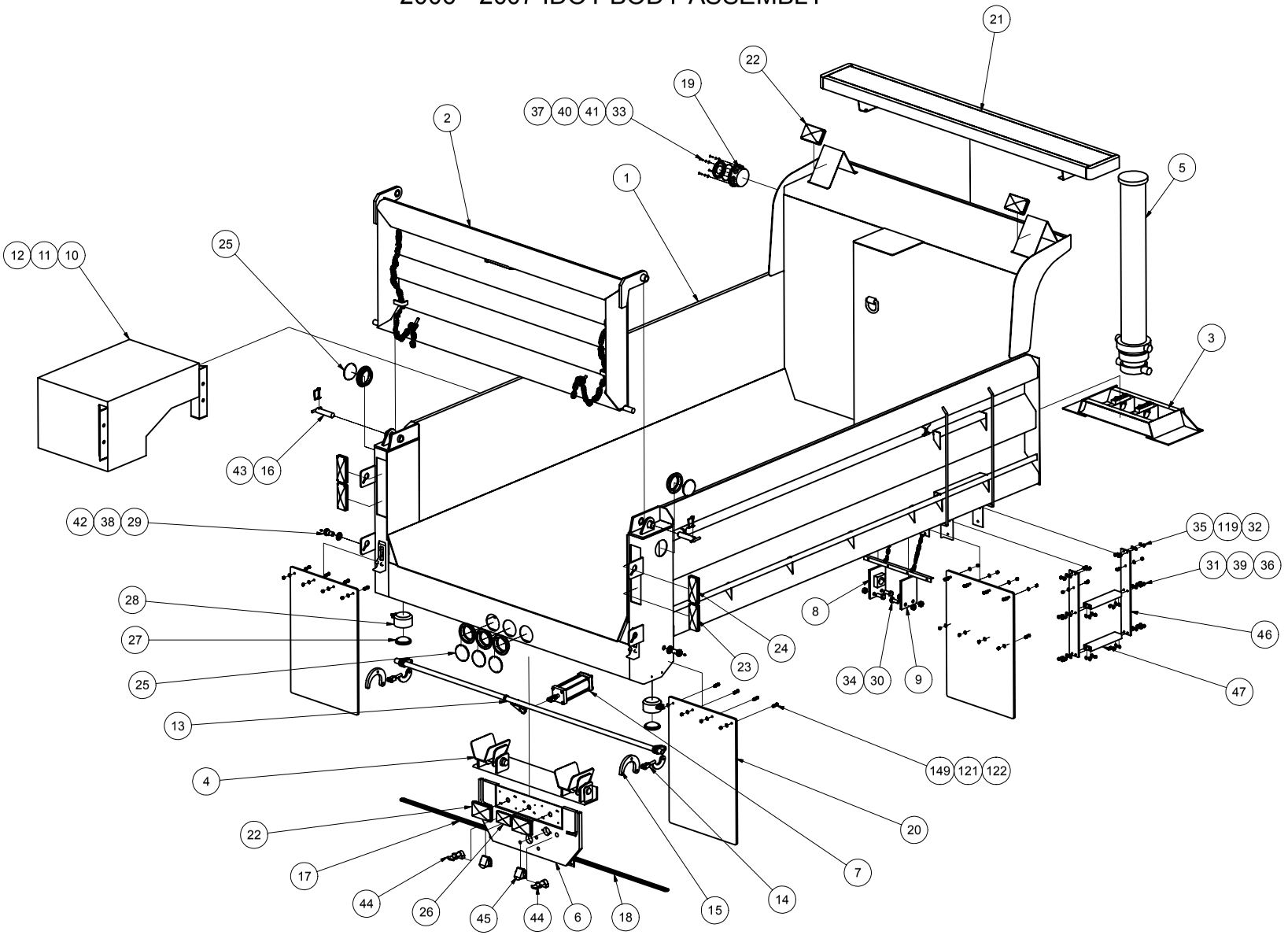
2006-2007 IDOT 12’ and 13’ Dump Body

22956 HWY 61 MORLEY, MO 63767 (573)262-3545 PH (573)262-3369 FX

2006 - 2007 IDOT BODY ASSEMBLY



EQUIPMENT MAY NOT BE EXACTLY AS SHOWN. SOME COMPONENTS MAY BE OPTIONAL
TO MAINTAIN OUR ON-GOING PRODUCT AND DEVELOPMENT IMPROVEMENT PROGRAM, VIKING-CIVES RESERVES THE RIGHT TO CHANGE EQUIPMENT & SPECIFICATION WITHOUT NOTICE.

This Owner's Manual File is Contained Within 41301003.idw

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IDOT 13' BODY PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	41303530		13' IDOT body assembly	1
2	41303000		Standard IDOT tailgate weldment	1
3	41301025		Mailhot hoist saddle	1
4	41301027		Wheeler 53 Series dump hinge assembly	1
5	45401003		CS120-5-3 Telescopic cylinder	1
6	20405025		Pintle plate (IDOT)	1
7	45401000		8" stroke air tailgate cylinder	1
8	41303019		Dog house slide weldment drivers side	1
9	41303020		Dog house slide weldment passenger side	1
10	41318008		IDOT valve body	1
11	41303063		Right valve body mounting bracket	1
12	41303064		Left valve body mounting bracket	1
13	41329014		Tailgate latch weldment	1
14	41301010		Standard tailgate eccentric	2
15	41318004		Latch eccentric	2
16	40900001		Pin 1 ¼ x 6 ½ pivot	2
17	41303021		Left anti-sail mud flap bracket	1
18	41303062		Right anti-sail mud flap bracket	1
19	41301018	50801	Truck-Lite junction box	1
20	41315020		Standard IDOT mud flap	4
21	41301026	01-0684061-00	IDOT Freedom light bar	1
22	41301020	01-0683719BR0	Smart LED 600 Series	4
23	41301015	01-0683718BR1	Smart LED 700 Series (red)	2
24	41301016	01-0663913-A4	Smart LED 700 Series (yellow)	2
25	41301017	01-06631398RR	Whelen 300 Series LED (round red)	5
26	41301024	01-06837597C0	Whelen 400 Series LED (clear)	1
27				
28	41318006		Bolt hex 1 x 2 UNC zinc	2
29	41315031	81064E	Bolt hex ¾ x 2 UNC zinc	4
30	3SK3585	81091	Bolt hex 3/8 x 1 ½ UNC zinc	32
31			Bolt hex 3/8 x 1 UNC zinc	6
32	427481		Screw mach pan HD # 10-32 x 1	4
33		81061	Nut hex ¾ UNC zinc	4
34			Nut hex 3/8 UNC zinc	6
35	3SK3591	81086C	Nut hex toplock 3/8 UNC zinc	32
36	436029		Nut hex machine screw 10 – 32 zinc	4
37	281013A	81013A	Flatwasher sae 1" zinc	2
38	3SK3595		Flatwasher sae 3/8 zinc	46
39	433073		Flatwasher mach # 10	8
40	411614		Washer lock mach #10	4
41	41315037	80577D/80579	Grease fitting ¼ 28 str	2
42	40900002		3/8 x 2 ½ latch pin	2
43	41315032		Tectran glad hand	2
44	41315027	73735	Tectran 7 pin trailor plug	2
45	41315021		3/8 x 3 ¼ x 24 HMW poly	2
46	41303057		IDOT ladder grip strut weldment	2

Wheeler Steel & Truck Equipment, Inc.

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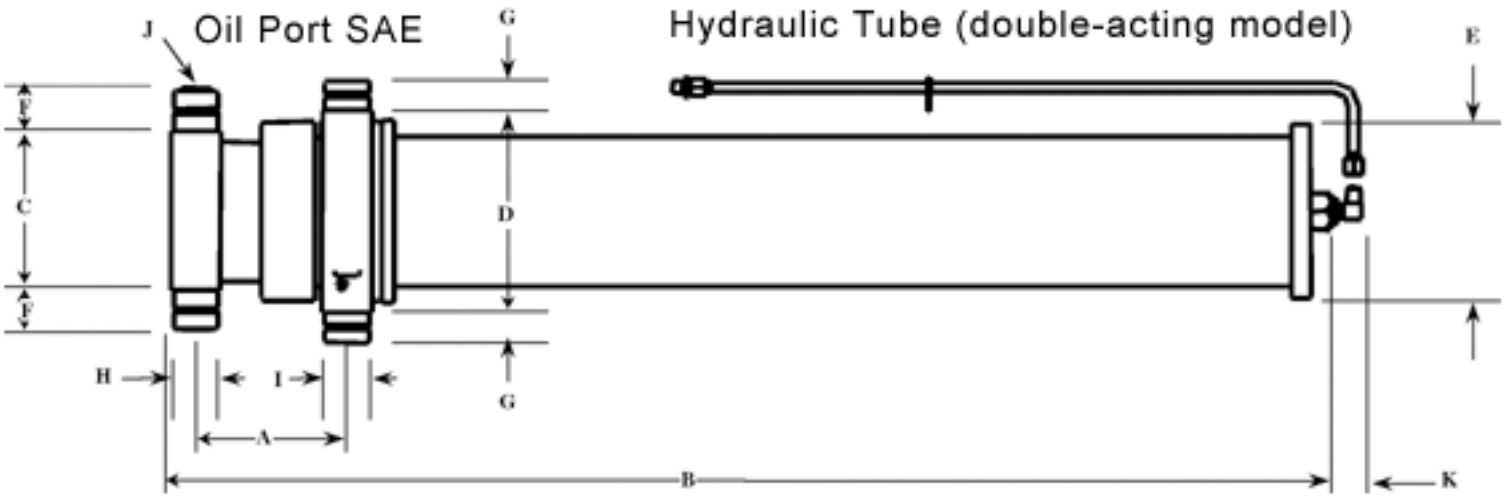
2006-2007
IDOT TELESCOPIC CYLINDER
CS SERIES

Telescopic Cylinder - CS SERIES



Many others sizes, strokes and mountings available upon request.

												Theoretical	
CYLINDER NUMBER	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**Gal.**	**Wt. Lbs.**
SINGLE ACTING													
PS0400902VM0035 (CS-90-4-2)	**A** 5 1/4	**B** 57	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	6.0	226
PS0401002VM0071 (CS-100-4-2)	**A** 5 1/4	**B** 62	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	6.7	244
PS0401102VM0072 (CS-110-4-2)	**A** 5 1/4	**B** 67	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	7.4	261
PS0400903VM0036 (CS90-4-3)	**A** 5 1/2	**B** 48	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	4.5	212
PS0401003VM0037 (CS100-4-3)	**A** 5 1/2	**B** 48	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	4.7	212
PS0401103VM0038 (CS110-4-3)	**A** 5 1/2	**B** 55	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	5.5	236

PS0401203VM0039 (CS120-4-3)	**A** 5 1/2	**B** 55	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	5.6	236
PS0501103VM0032 (CS110-5-3)	**A** 5 7/8	**B** 52 1/4	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	8.7	324
PS0501203VM0107 (CS120-5-3)	**A** 6 1/2	**B** 57 5/8	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	9.8	350
PS0501303VM0028 (CS130-5-3)	**A** 6 1/2	**B** 57 5/8	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	10.2	350
PS0501403VM0051 (CS140-5-3)	**A** 6 3/8	**B** 61 7/8	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	-	11.0	368
PS0601303VM0042 (CS130-6-3)	**A** 7 5/8	**B** 58 1/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	-	15.5	430
PS0601403VM0079 (CS140-6-3)	**A** 6 1/2	**B** 61 7/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	-	15.9	445
PS0601504VM0047 (CS150-6-4)	**A** 7 5/8	**B** 56 3/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	-	15.5	430
PS0601604VM0161 (CS160-6-4)	**A** 7 5/8	**B** 56 3/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	-	15.7	434
PS0601704VM0050 (CS170-6-4)	**A** 7 5/8	**B** 59	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	-	15.9	450
DOUBLE ACTING (LAST STAGE ONLY)													
PSD0400802VM0102 (CS-80-4-2 DA)	**A** 6 1/2	**B** 54 11/16	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	5.5	221
PSD0400902VM0093 (CS-90-4-2 DA)	**A** 5 1/8	**B** 57	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	6.0	229
DOUBLE ACTING (ON ALL STAGES)													
PSD0450803VM0134 (CS80-4.5-3 DA)	**A** 5 1/2	**B** 48	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	4.2	214
PSD0450903VM0098 (CS90-4.5-3 DA)	**A** 5 1/2	**B** 48	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	4.4	214

PSD0451003VM0129 (CS100-4.5-3 DA)	**A** 5 1/2	**B** 48	**C** 5 3/4	**D** 8	**E** 6 1/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	4.6	215
PSD0551103VM0136 (CS110-5.5-3 DA)	**A** 6 1/2	**B** 57 3/4	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	9.3	360
PSD0551203VM0108 (CS120-5.5-3 DA)	**A** 6 1/2	**B** 57 3/4	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	9.7	360
PSD0551303VM0126 (CS130-5.5-3 DA)	**A** 6 1/2	**B** 57 3/4	**C** 7	**D** 9	**E** 7 3/4	**F** 2	**G** 1 1/4	**H** 1 7/8	**I** 1 7/8	**J** 12	**K** 1 3/16	10.0	360
PSD0651303VM0138 (CS130-6.5-3 DA)	**A** 7 5/8	**B** 63 1/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	**K** 1 3/16	16.1	457
PSD0651403VM0162 (CS140-6.5-3 DA)	**A** 7 5/8	**B** 63 1/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	**K** 1 3/16	16.5	457
PSD0651504VM0109 (CS150-6.5-4 DA)	**A** 7 5/8	**B** 58 7/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	**K** 1 3/16	14.8	460
PSD0651604VM0013 (CS160-6.5-4 DA)	**A** 7 5/8	**B** 58 7/8	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	**K** 1 3/16	15.0	454
PSD0651704VM0163 (CS170-6.5-4 DA)	**A** 7 5/8	**B** 61	**C** 8	**D** 10 3/16	**E** 8 3/4	**F** 2	**G** 1 1/2	**H** 2 1/4	**I** 2 1/4	**J** 16	**K** 1 3/16	15.2	468

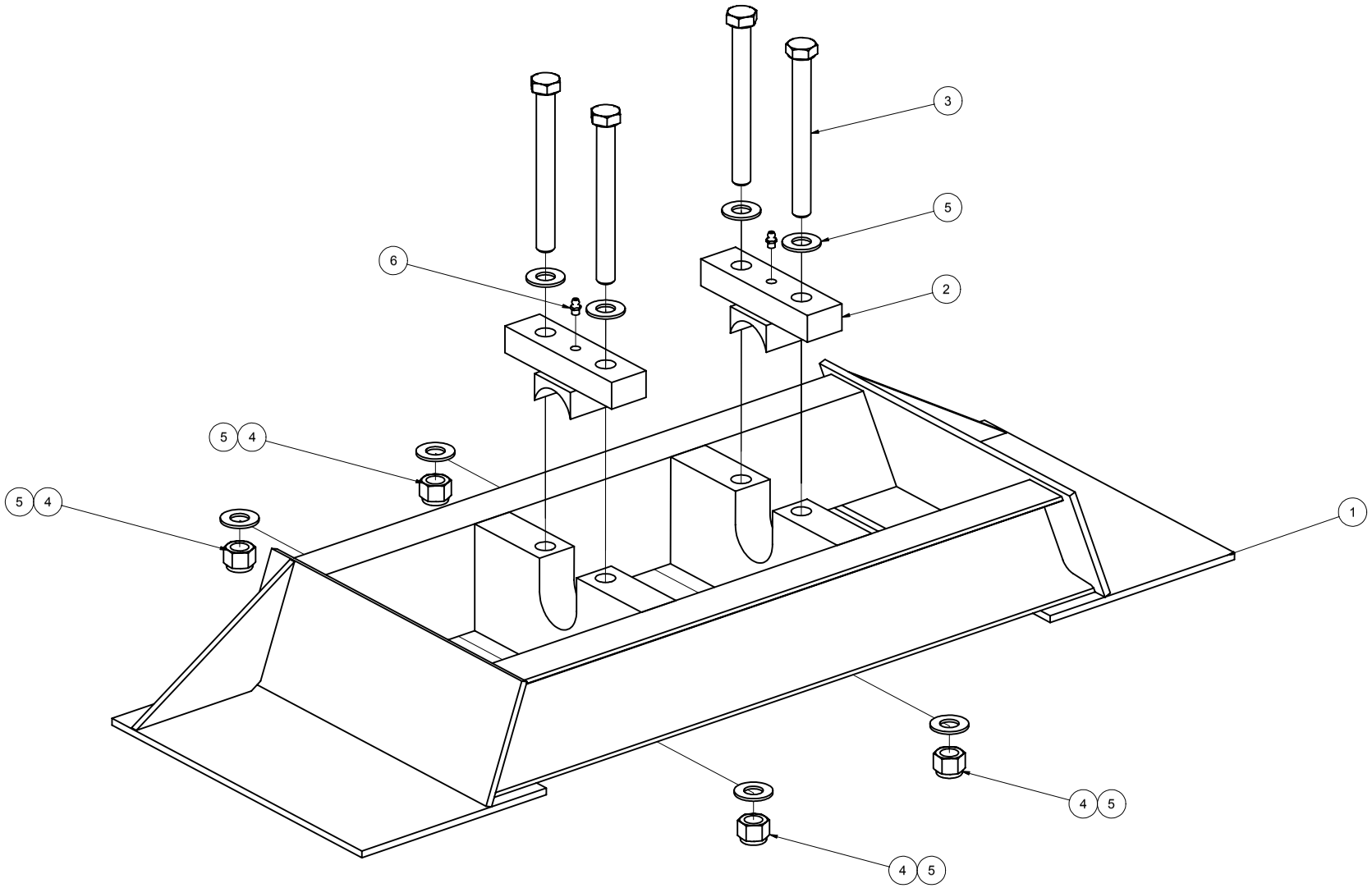
Wheeler Steel & Truck Equipment, Inc.

22956 Highway 61 Morley, MO 63767 Phone: (573) 262-3545 Fax: (573) 262-3369

2006-2007
IDOT HOIST BOX
&
WHEELER 53 SERIES
DUMP HINGE

22956 HWY 61 MORLEY, MO 63767 (573)262-3545 PH (573)262-3369 FX

MAILHOT HOIST SADDLE PART #41301025
(MAILHOT 5.5 HOIST)



EQUIPMENT MAY NOT BE EXACTLY AS SHOWN. SOME COMPONENTS MAY BE OPTIONAL
TO MAINTAIN OUR ON-GOING PRODUCT AND DEVELOPMENT IMPROVEMENT PROGRAM, VIKING-CIVES RESERVES THE RIGHT TO CHANGE EQUIPMENT & SPECIFICATION WITHOUT NOTICE.

This Owner's Manual File is Contained Within 41301025.idw

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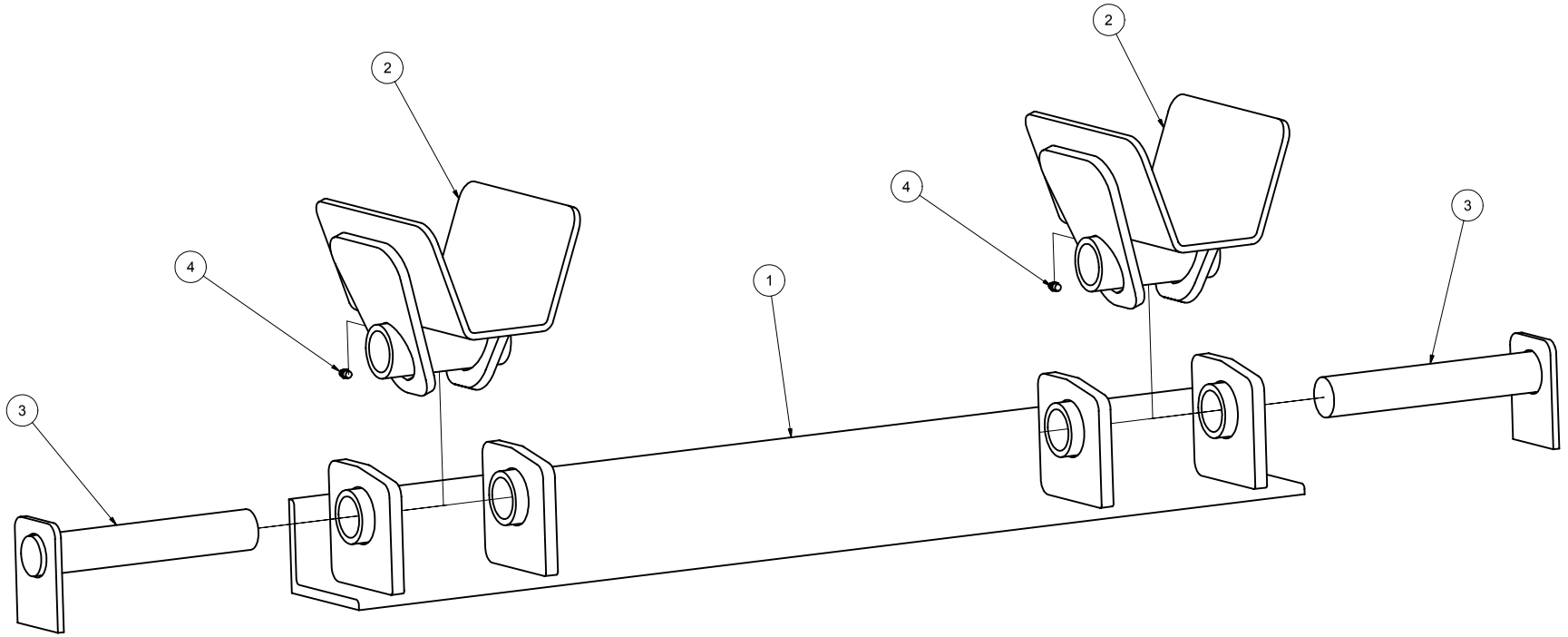
MAILHOT HOIST SADDLE
PART # 41301025 (MAILHOT 5.5 HOIST)

Item	Drawing No.	Alt. Item No.	Description	Qty
1	41303011		Mailhot hoist saddle weldment	1
2	41303065		Mailhot hoist saddle retaining weldment	2
3	HW40A-1048		Bolt hex 5/8 x 6 UNC zinc	4
4	SK3781		Nut hex toplock 5/8” UNC zinc	4
5	HW14A-10	81070A	Flatwasher SAE 5/8 zinc	8
6	260106		Grease fitting ¼ 28 STR	2

22956 HWY 61 MORLEY, MO 63767 (573)262-3545 PH (573)262-3369 FX

WHEELER 53 SERIES REAR DUMP BODY HINGE ASSEMBLY
PART #41301027



EQUIPMENT MAY NOT BE EXACTLY AS SHOWN. SOME COMPONENTS MAY BE OPTIONAL
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This Owner's Manual File is Contained Within 41301027.idw

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WHEELER 53 SERIES DUMP BODY HINGE ASSEMBLY PARTS

Item	Drawing No.	Alt Item No.	Description	Qty
1	41303012		53 Series dump hinge weldment	1
2	41303013		53 Series dump hinge saddle weldment	2
3	41303066		53 Series hinge pivot weldment	2
4	260106		Grease fitting ¼ 28 STR	2

Wheeler Steel & Truck Equipment, Inc.

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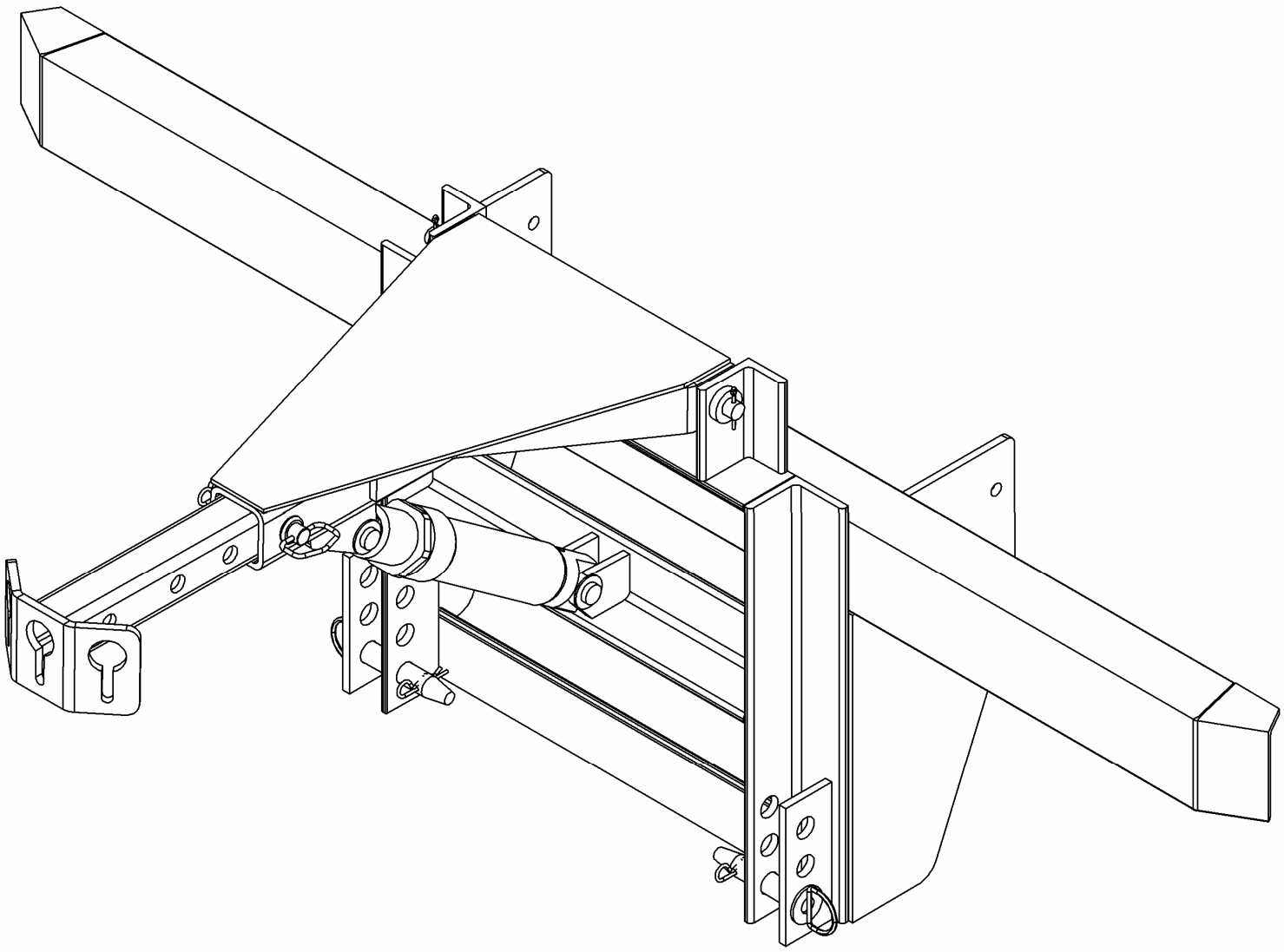
2006-2007
IDOT LOW PRO TRUCK HITCH

HENKE LOW PROFILE TRUCK HITCH

ILLINOIS DOT 2006



PARTS BOOK AND MOUNTING INSTRUCTIONS

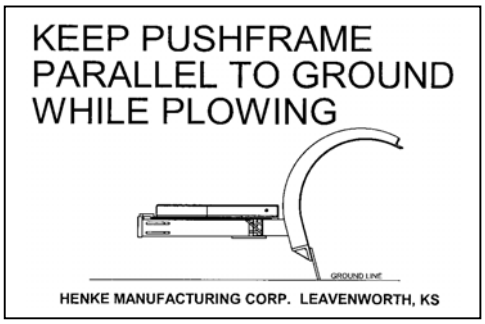
HENKE MANUFACTURING CORPORATION

MANUFACTURERS OF SNOW REMOVAL EQUIPMENT FOR 90 YEARS

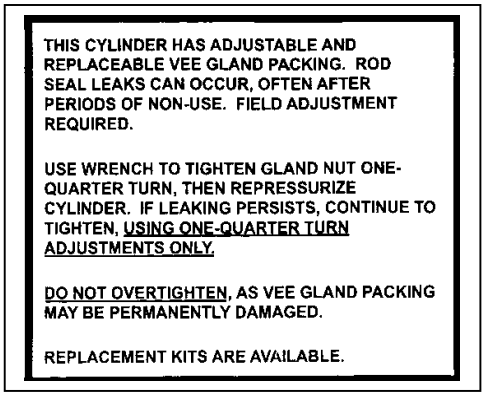
3070 WILSON AVE. LEAVENWORTH, KS 66048 PHONE(913)682-9000 FAX(913)682-0300

SAFETY

ONE OR MORE OF THESE SAFETY STICKERS MAY APPEAR ON YOUR HENKE PLOW. THEY ARE PLACED THERE TO INFORM YOU OF SAFETY ISSUES CONCERNING YOUR TYPE OF PLOW.
ALWAYS READ AND FOLLOW SAFETY WARNINGS. THEY ARE IMPORTANT FOR YOUR SAFETY AND THE PROPER OPERATION OF YOUR HENKE PLOW.



CAUTION !! CAUTION!!
SIDEMOUNT WING PLOW WARNINGS
1. ALWAYS USE SAFETY CHAIN WHEN TRANSPORTING WING.
2. SLIDE ASSEMBLY OR WING MAY EXTEND ABOVE CAB HEIGHT.
3. OVER-EXTENDING WING LIFT CYLINDER TO APPLY OUTBOARD DOWN PRESSURE MAY RESULT IN DAMAGE TO CYLINDER OR HARDWARE.
4. ARTICULATING GRADER WHEN WING IS IN TRANSPORT POSITION MAY DAMAGE HARDWARE.
HENKE MANUFACTURING CORP.
LEAVENWORTH, KANSAS


THIS CYLINDER HAS ADJUSTABLE AND REPLACEABLE VEE GLAND PACKING. ROD SEAL LEAKS CAN OCCUR, OFTEN AFTER PERIODS OF NON-USE. FIELD ADJUSTMENT REQUIRED.
USE WRENCH TO TIGHTEN GLAND NUT ONE-QUARTER TURN, THEN REPRESSURIZE CYLINDER. IF LEAKING PERSISTS, CONTINUE TO TIGHTEN, USING ONE-QUARTER TURN ADJUSTMENTS ONLY.
DO NOT OVERTIGHTEN, AS VEE GLAND PACKING MAY BE PERMANENTLY DAMAGED.
REPLACEMENT KITS ARE AVAILABLE.

1. **PERSONS WHO INSTALL, MOUNT, OPERATE OR SERVICE THIS EQUIPMENT MUST BE PROPERLY INSTRUCTED AND WARNED. DO NOT LET ANYONE OPERATE EQUIPMENT WITHOUT PROPER INSTRUCTION.**

2. **READ DECAL INSTRUCTIONS, CAUTIONS, AND WARNINGS. READ THE SAFETY MESSAGES IN THIS MANUAL AND REPLACE MISSING OR DAMAGED SAFETY DECALS.**

3. **UNAUTHORIZED MODIFICATIONS TO THE SNOWPLOW AND RELATED COMPONENTS MAY IMPAIR THE FUNCTION AND/OR SAFETY.**

IN SEASON MAINTENANCE

Snow removal equipment must be cared for and maintained regularly. Daily or pre-route inspection and maintenance are necessary. Failure to do so may affect efficiency and safety.

A visual inspection must be carried out after every 8 hours of operation. Look for damaged components, bends, cracked welds or hydraulic leaks. **REPAIR IMMEDIATELY!** It is recommended to re-torque all bolts after the first 8 hours of use and to regularly check for loosened or missing fasteners. Replace any damaged or missing fasteners immediately.

Because of the environment in which snow equipment is expected to operate, hydraulic lines, fasteners, wearable or replaceable items and warning decals may become damaged by snow, ice and road debris. These items must be inspected daily and replaced if necessary to avoid equipment damage or personal injury.

Lubrication of moving parts is of the utmost importance. Exposure to snow, ice, salt and road debris will wash away lubrication quickly and it may be necessary to inspect and reapply lubrication more than once a day.

END OF SEASON SNOW PLOW MAINTENANCE

GROUND ENGAGING COMPONENTS

CUTTING EDGES & GUARDS

Replace any broken cutting edges, unevenly or excessively worn cutting edges, and broken or worn wear guards.

RUNNING GEAR

Replace broken, worn, or missing running gear shoes, and any damaged adjuster leg components. Grease internal threads and sliding members (it's best to disassemble and grease directly; zerks aren't as effective at greasing these areas).

HARDWARE

Replace missing or broken bolts. Proper torque is important! Use grade 8 plow bolts for steel cutting edges.

HYDRAULICS

HOSES

Plug or cap any QC fittings or any open hose ends. Inspect hoses for any leaks or potential leaks. Secure hoses with hose clamps.

CYLINDERS

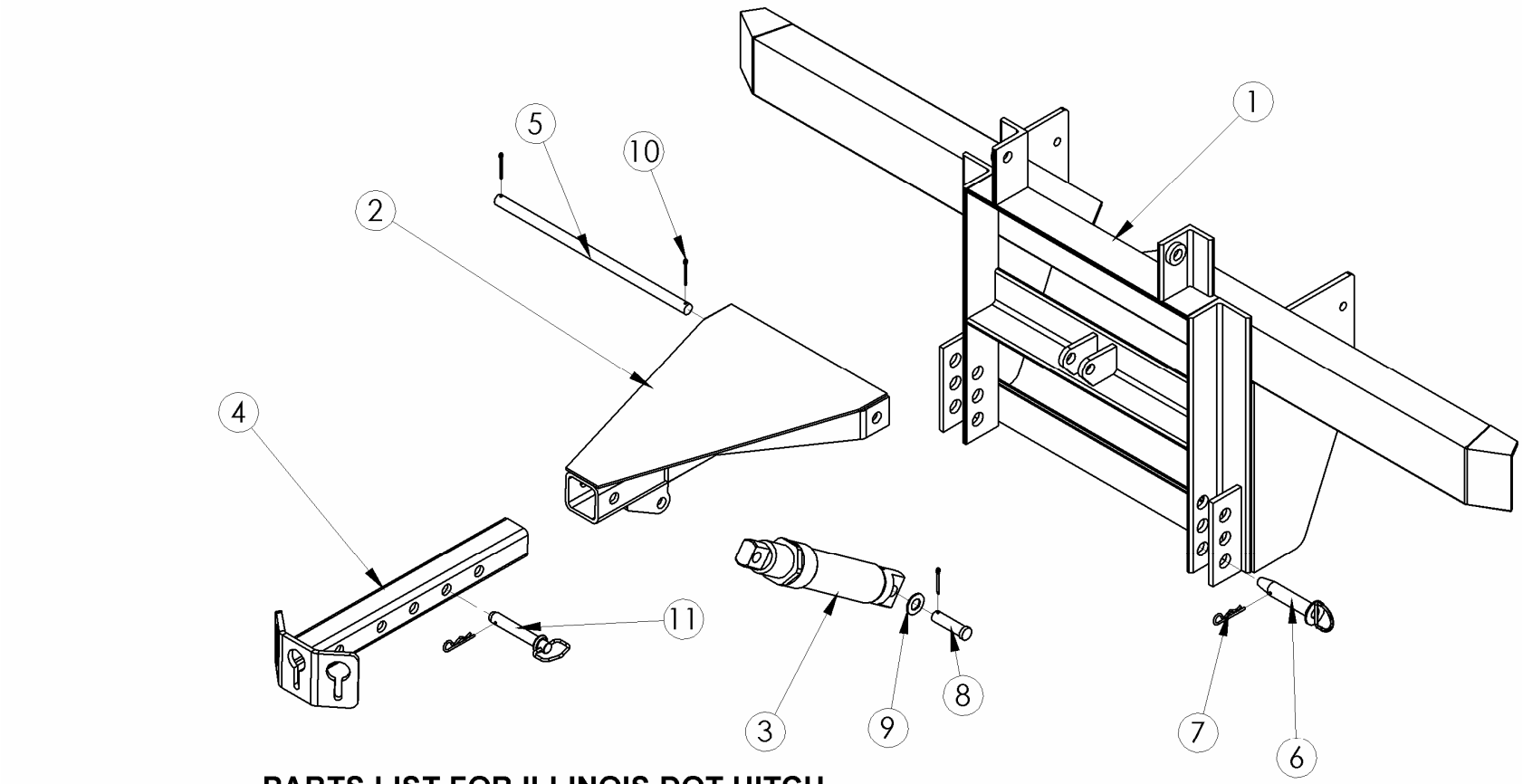
Check for leaks, and any chrome rod dents or scratches. (If v-stack rod end seals are leaking, a ¼ turn of the pack nut will often stop a small leak). Apply a light coat of oil or grease on exposed rod surfaces.

FRAME AND MOLDBOARD

JOINTS

Check pins, bushings, and pivot bolts for wear. Make sure all keepers are in place. Make sure shear bolts and pins are same as original equipment (usually grade 2). Some drivers don't like replacing shear pins and will install grade 8 replacements to avoid replacing during a storm. These items are *designed to shear* to protect the driver and the equipment. **CHECK WELDMENTS FOR CRACKS.**

REPLACE WORN OR BROKEN PARTS FOUND BY ABOVE INSPECTIONS



PARTS LIST FOR ILLINOIS DOT HITCH

Item No.	QTY	Part Number	Description
1	1	3900-A0198	Low Profile Lift Frame Weldment
2	1	3900-A0206	Lift Arm Outer Tube Assembly
3	1	7080104	Hydraulic Cylinder, 3 x 10 S/A
4	1	3900-A0176	Inner Tube Assembly
5	1	1300-2776	Hitch Arm Attaching Pin
6	2	1300-A0021	Pin Assembly
7	3	7050081	Hair Pin, #8 .177 x 3.75 (Included with 7050091 Hitch Pin)
8	2	7050082	Clevis Pin, 1 x 3.5
9	2	7040013	Flat Washer, Hardened, 1" SAE
10	4	7050003	Cotter Pin, 3/16 x 2
11	1	7050091	Hitch Pin, 1 x 4.75 Grip (Includes 7050081 Hair Pin)

EXPLODED VIEW - ILLINOIS DOT HITCH

CUTTING EDGES

6” STEEL	1/2” THICK	5/8” THICK	3/4” THICK
2FT.	N/A	7150119	N/A
3FT.	7150153	7150120	7150073
4FT.	7150154	N/A	7150072
5FT.	N/A	N/A	7150026
6FT.	N/A	N/A	7150004
7FT.	N/A	N/A	7150028
9FT.	N/A	N/A	7150036
10FT.	7150008	7150090	N/A
11FT.	7150009	7150089	N/A
12FT.	7150010	N/A	7150032

8” STEEL	1/2” THICK	5/8” THICK
2FT.	N/A	7150077
3FT.	7150037	7150078
4FT.	7150038	7150079
5FT.	7150011	N/A
6FT.	7150005	N/A
8FT.	7150012	N/A
9FT	7150013	7150045
10FT.	7150014	7150043
11FT.	7150015	7150040
12FT.	7150016	7150044

SNOWBASKET	1” THICK
8FT.	7150052
9FT.	7150053
10FT.	7150088

CARBIDE	3/4” THICK
3FT.X5” TALL	N/A
3FT.X6” TALL	7150035
4FT.X5” TALL	7150123
4FT.X6” TALL	7150025
5FT.X8” TALL	7150097
6FT.X6” TALL	7150124

RUBBER	1 ½” THICK	RETAINING STRIP	RETAINING STRIP / PLOWS WITH WEAR SHOES OR CURB GUARDS
3FT.	2300-0673	2300-0672	For use on REL end gate only
9FT.	3500-0009	1300-2223	N/A
10FT.	3500-0010	1300-0394	3500-0017
11FT.	3500-0011	1300-0395	3500-0018
12FT.	3500-0012	1300-0396	3500-0019
14FT.	3500-0014	1300-0401	N/A
16FT.	3500-0016	1300-0402	N/A

CUTTING EDGE HARDWARE

TYPE	LENGTH	PART #	USES/NOTES
PLOWBOLTS 5/8-11 GRADE 8	2” 2 ½” 3” 3 ½” 4 ½” 6”	7150001 7150003 7150002 7150103 7150106 7150107	FOR STANDARD CUTTING EDGES AND WEAR GUARDS
CARRIAGE BOLTS 5/8-11 GRADE 8	3” 4 ½”	7020280 7020175	FOR SOME WRAPAROUND CURB GUARDS (SQUARE HOLES,N/CS)
HEX BOLTS GRADE 2	4”	7020064	RUBBER AND POLY CUTTING EDGES (USE TOPLOCK NUTS ONLY)
TOPLOCK NUT, 5/8-11 GRADE C	N/A	7030084	USE WITH ALL CUTTING EDGES

Henke Standard Warranty Policy

Henke Manufacturing Corporation(HMC) warrants its products against defects in material and workmanship for a period of 12 months from date of delivery.

HMC, at its option will repair or replace any parts or components found to be defective in materials or workmanship.

Defects will be determined through photos provided by dealer or user, or through physical inspection of returned parts. Parts are to be returned freight prepaid when requested to HMC, labeled with a returned goods authorization number.

Authorization for warranty repair will be faxed to the reporting dealer, and will include labor hours that HMC agrees to credit the dealer, and the Return Goods Authorization Number, if applicable. Credit amounts for agreed labor hours will not exceed 70% of dealer shop selling rate. Mileage, travel time, overtime, or any incidental costs will not be included in warranty consideration. Credits will apply to current or future business with HMC.

This warranty does not include normal wear items such as cutting edges, wear guards, scarifier teeth, etc. Repairs required as a result of misapplication, accidental damage, improper maintenance, improper installation, or negligence are also not covered by warranty.

HMC warranty for any purchased components, such as hydraulic cylinders will be superceded by, and equal to the component manufacturer warranty.

SELLER IS NOT, UNDER ANY CIRCUMSTANCE, LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DEALER WARRANTY PROCEDURE

For units delivered within the past 12 months, report any warranty problems needing repair to our Product support department. Have information ready regarding:

1. Henke unit model and serial number,
2. Model of equipment Henke unit is attached to (prime mover)
3. Description of the problem and any helpful information by the end user. (Photos are always helpful).

Measurements or photos may be requested by Henke engineering for any issues regarding prime mover proximity and clearance, or any other unique considerations of fit and adaptability. These may be necessary for a proper repair recommendation and procedure.

Henke will respond with a written labor hour allowance for Henke participation on a faxed claim form and will ship any required replacement parts. If necessary, a repair procedure will be included on the claim form. A parts invoice will be generated to confirm shipment of the replacement parts.

If defective parts are needed for analysis, Henke will request their return.
Any such returned items are to be labeled with the **claim number** and returned to:

Henke Manufacturing Corp
ATTN:Product support
3070 Wilson Av
Leavenworth, Ks. 66048
RGA#_____

The dealer should perform repairs as agreed on a dealer warranty repair order.
Return the claim form with a copy of the dealer warranty repair order and service report.
Credit as agreed will be issued to the dealer upon receipt of the dealer warranty repair order invoice (Pro-forma invoice), and upon receipt, inspection and warranty confirmation of the returned parts if any.

Wheeler Steel & Truck Equipment, Inc.

22956 Highway 61 Morley, MO 63767 Phone: (573) 262-3545 Fax: (573) 262-3369

2006-2007
IDOT PINTLE HITCH

PREMIER

THE FIRST NAME IN QUALITY COUPLINGS

Installation, Inspection, Operation & Maintenance Guide

Model 2200 / 2200L

IMPORTANT

Read these instructions completely before installing, using or attempting to repair this coupling. If you have any questions, call Premier at 1-800-255-5387 (1-503-234-9202).

Do not remove "Important Warning" label attached to hitch.

Selecting The Right Equipment

Whatever your application, selecting the proper equipment for the job is very important. Proper selection along with regular inspection and maintenance will help keep operating costs minimal while providing long life to each component. Below are general guidelines for selecting Premier Couplings and Drawbar Eyes. If you feel that your application is unique, please give Premier a call so that we may help you through the selection process.

Follow these four steps to ensure proper selection of Premier Couplings and Drawbar Eyes.

Step 1: **Determine "Gross Trailer(s) Weight"** (GVWR(s) of towed trailers) → **Step 2:** **Determine "Tongue Weight Capacity"** (Maximum occurring tongue weight) → **Step 3:** **Add Margin of Safety** (Dependent upon your equipment and operating environment) → **Step 4:** **Browse Premier Product Catalog** (Based on Steps 1 - 3)

Step 1: Determine "Gross Trailer(s) Weight"

"Gross Trailer(s) Weight" is usually determined by the Gross Vehicle Weight Rating (GVWR). This information is attached to the trailer by the trailer manufacturer.

Double Trailer Configuration

Example only, each application may vary and should be considered unique.

For "Double Trailer" configurations, only the rear trailer is considered when selecting your Premier Coupling or Drawbar Eye. In this example, a Coupling and Drawbar Eye with a "Gross Trailer Weight" rating of 40,000 lbs. (18,143 kg) would be the minimum rating acceptable for normal, over-the-road applications (see Tongue Weight section below)

Triple Trailer Configuration

Example only, each application may vary and should be considered unique.

For "Triple Trailers", only the two most rearward trailers are considered in selecting your Premier Coupling or Drawbar Eye. In this example, a Coupling and Drawbar Eye with a "Gross Trailer Weight" rating of 80,000 lbs. (36,287 kg) would be the minimum acceptable for normal, over-the-road applications (see Tongue Weight section below).

Step 2: Determine "Tongue Weight Capacity"

"Tongue Weight Capacity" is the maximum expected weight at the drawbar eye. If a hinged drawbar is used, the maximum weight will be approximately 1/2 the overall drawbar weight. If a non-hinged drawbar is used and the actual tongue weight is not known, you can approximate the weight by multiplying the GVWR of the towed trailer by 15%. However, each application is unique and the best practice is to weigh the tongue when the trailer is loaded to its GVWR.

Step 3: Considering Operating Conditions and Environments

Environments such as rough uneven roads or off-road use can dramatically increase shock loads to both drawbar eyes and couplings. Certain types of equipment and/or operating practices can also dramatically increase loads through equipment binding and/or improper loading practices. Of special concern is high tongue weight. In general, increasing the "Gross Trailer Weight" (Step 1:) and "Tongue Weight Capacity" (Step 2:) by a minimum of 25% will be sufficient for many applications. However, each application is unique and every environment different, therefore your application may require more than 25%.

Once both "Gross Trailer(s) Weight" (Step 1:) and "Tongue Weight Capacity" (Step 2:) have been determined, evaluate your operating conditions and apply an appropriate margin of safety.

Step 4: Browse Premier Product Catalog

Browse the Premier Product Catalog and refer to the "Specifications" section of each product. Be sure to review the "Understanding Premier Load Specifications" section on the next page and "Coupling to Drawbar Eye Cross-Reference" sheet.

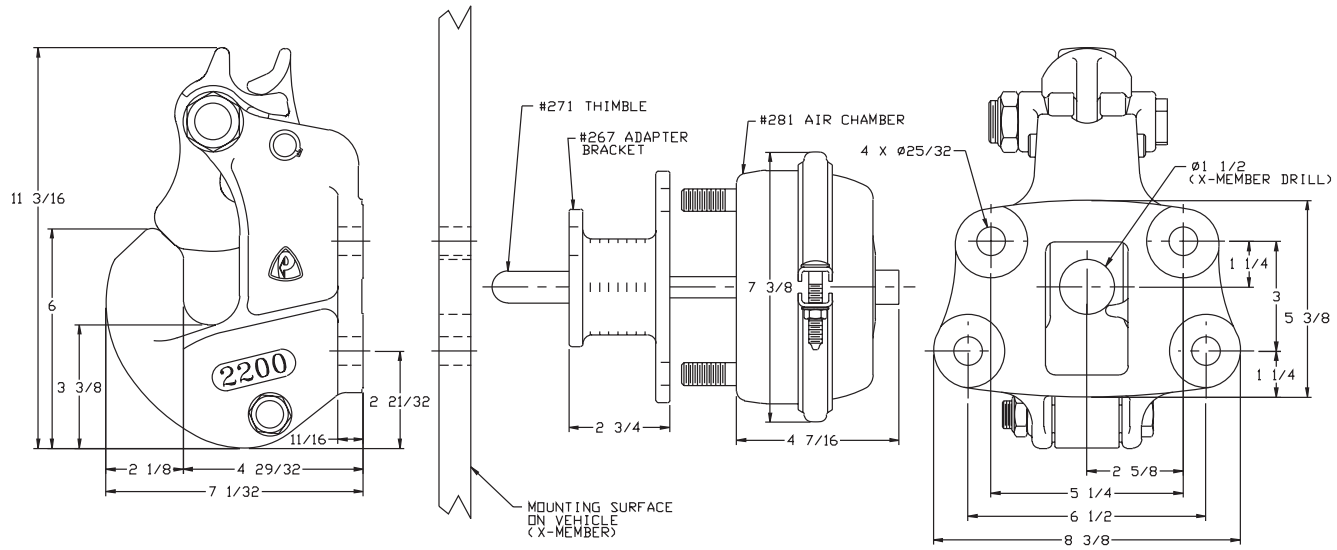
2200 SPECIFICATIONS AND LOAD CAPACITIES

SAFETY WARNING

This coupling is designed for towing under normal conditions within the stated gross trailer weight. Do not overload or abuse this hitch. Overloading or abuse may lead to property damage, severe injury, or death.

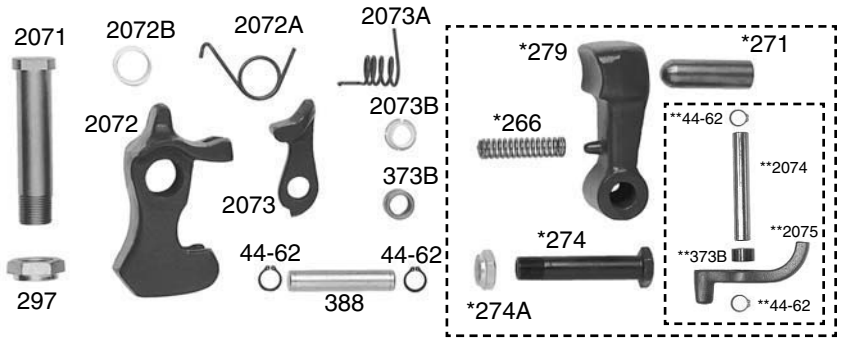
Gross Trailer Weight:	100,000 lbs.	(45,359 kg)
Maximum Tongue Weight:	20,000 lbs.	(9,071 kg)
Ultimate Latch Capacity:	60,000 lbs.	(27,215 kg)
Maximum Eye X-Section:	1 13/16 in.	(46 mm)
Minimum Eye Opening:	2 3/8 in.	(60 mm)
Unit Weight:	29.8 lbs.	(13.5 kg)

2200 STANDARD INSTALLATION DRAWING



Pushrod length is 3 5/8 in. (92 mm) plus thickness of mounting structure for standard installations as illustrated.

2200 REPLACEMENT PART INFORMATION



2000PK Parts Kit Includes:

44-62: Snap Ring (2)	2073A: Spring
297: Locknut	2073B: Bushing
373B: Spacer	*266: Spring
388: Pin	*271: Thimble
2071: Bolt	*274: Bolt
2072: Latch	*274A: Locknut
2072A: Spring	*279: Shoe
2072B: Bushing	**2075: Handle
2073: Latch Lock	**44-62: Snap Ring (2)
	**2074: Pin
	**373B: Spacer

*Not included in parts kit, available individually
**Available as a separate kit (2075K)

2200 ACCESSORIES

Standard Installation Kit (2200A) Includes:

2200 Coupling, 501 Bolt Kit, 281 Air Chamber, 267 Air Chamber Adapter Bracket and 271 Thimble.

Optional Accessories:

- 282 Type-30 Air Chamber: Provides a larger diaphragm for greater shoe force compared to 281 Air Chamber.
- Air Chamber Brackets: 267H (3/4"/19mm), 267F (4 5/8"/117mm)
- Thimbles: 271B (4 3/8"/111mm), 271C (5 1/2"/140mm)
- 438 Drawbar Guides: Helps guide drawbar eye into coupling.
- 2075 Low Profile Lever Kit: Designed for low clearance installations (enables one-handed latch operation).

2200 INSTALLATION

Installation Procedure:

1. Measure mounting structure thickness and cut pushrod length on air chamber to 3 5/8" plus mounting structure thickness. (i.e. 1" thick mounting structure would equate to: 3 5/8" + 1" = 4 5/8" pushrod.)

2. Plumb air line to coupling service chamber from vehicle's emergency side air supply. NEVER use service side air supply.

3. Prior to drilling cross member on vehicle, make certain that structure coupling is to be attached to is of adequate strength.

4. Measure and layout cross member according to drawing and then drill holes.

5. Mount coupling using Premier's 501 Bolt Kit or use 4 - 3/4" grade-8 bolts and grade-C lock nuts. Only use new fasteners when mounting couplings or drawbar eyes and torque to SAE specifications.

6. Once mounted, check latch components for proper operation and clearances (see next section for opening and closing latch). If operation of latch components is sticky, lubricate rotation points with a light penetrating oil. Work latch assembly several times to distribute lubricant evenly and remove any excess with a rag.

7. **WARNING! Keep fingers clear of coupling during this test.** Activate emergency side air supply and visually verify activation of 279 Shoe. Shoe should rotate forward when emergency air supply is charged and retract when air supply is removed. Please note: The 279 Shoe acts as a shock absorbing device to help smooth rides between mated vehicles. **It is not considered part of the latching mechanism.**

Special Notes:

1. Never weld on any coupling assembly in order to repair damaged or worn bodies or parts. Field or shop weld repairs are inadequate, and may further weaken the coupling.

2. Use only genuine PREMIER replacement parts on any repairs. Use of other parts, which can have different specifications or tolerances, may fail to alert you to non-obvious damage to the hitch which can lead to hitch failure.

2200 INSPECTION, OPERATION & MAINTENANCE

Inspection and Maintenance:

1. Visually inspect the coupling body and latch components for cracks, impact damage or deformation before each and every use. DO NOT USE if any of these conditions exist.

2. Check for gap between the latch and top of the horn on coupling body before each and every use. A gap of 3/8" or more means the hitch must be taken out of service and repaired or replaced.

3. If the wear area on the pintle/hook has worn more than 20% from its original cross-section, the coupling is considered out of service and must not be used.

4. Lubrication of latch components must be performed at 90-day intervals or sooner depending on the operating environment. Lubricate latch components with a spray-type lubricant to evenly coat all pins. Rotate each latch component several times to evenly distribute lubricant.

5. Remove any excess lubricant with rag. Do not apply lubricant to pintle/horn or saddle area of hitch body.

WARNING: OTHER INSPECTIONS AND PROCEDURES ARE ALSO REQUIRED PRIOR TO OPERATION OF COMBINATION VEHICLES. CONSULT AND FOLLOW ALL FEDERAL MOTOR CARRIER SAFETY REGULATIONS AS WELL AS LOCAL OR STATE GUIDELINES, INCLUDING THE USE OF ADEQUATELY RATED SAFETY CHAINS.

2200 INSPECTION, OPERATION & MAINTENANCE

Opening Coupling Latch: (If using 2075 Low Profile Handle Option, see specific instructions below)

1. Grasp 2073 Latch Lock and push back towards mounting plate until motion stops, while holding in this position, grasp top of 2072 Latch and pull forward rotating 2072 Latch into body.

2. Slowly release 2073 Latch Lock until it has rotated to it's forward most position which now holds 2072 Latch open. Coupling is now open and ready for mating with drawbar eye.

Closing Coupling Latch:

1. Pull top of 2072 Latch forward. While holding in this position, rotate 2073 Latch Lock back towards mounting plate of coupling.

2. While holding 2073 Latch Lock, slowly release 2072 Latch until fully forward and seated. Release 2073 Latch Lock making sure that it seats fully forward and down in slot on top of 2072 Latch.

3. To test for proper latching, apply force to front of 2072 Latch (down near top of horn on body). 2072 LATCH SHOULD NOT OPEN! If the latch does not stay closed, do not use until repaired or replaced.

4. **WARNING: PRIOR TO TOWING, MAKE CERTAIN THAT ADEQUATELY RATED SAFETY CHAINS HAVE BEEN PROPERLY CONNECTED!**

Low Profile Lever Option

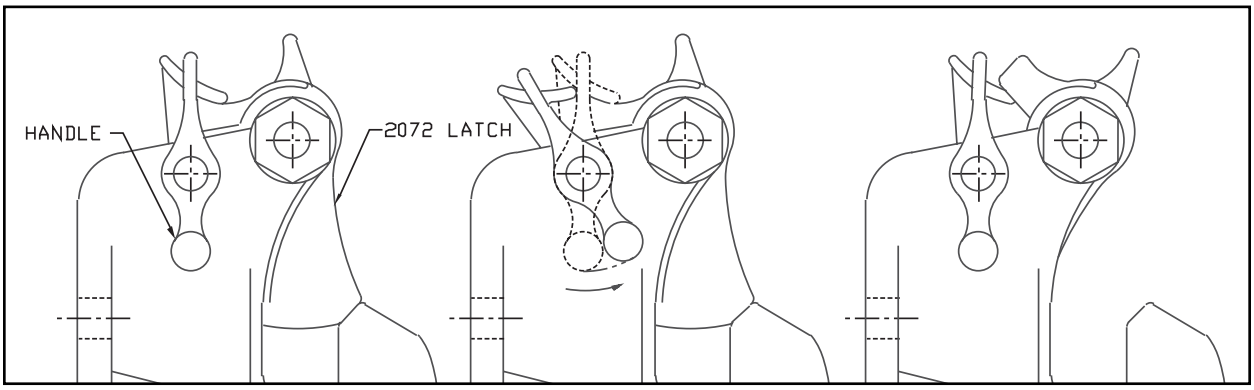


Figure 1 **Figure 2** **Figure 3**

Opening Coupling Latch (Low Profile Lever Option):

1. Facing the mounted coupling, grasp bottom of handle with fingers and pull forward (Figures 1 and 2).

2. While holding the handle forward, push in and hold the 2072 main latch.

3. Slowly release the handle entrapping the 2072 main latch in the open position (Figure 3).

4. Couple or uncouple the equipment.

Closing Coupling Latch (Low Profile Lever Option):

The latch can be closed in the reverse of above or will close automatically when handle is again pulled forward. (WARNING! KEEP FINGERS CLEAR OF 2072 LATCH AND HOOK PORTION OF COUPLING WHEN CLOSING.)

IMPORTANT GUIDELINES THAT APPLY TO ALL PREMIER AIR ADJUSTED COUPLINGS

- DO NOT WELD ON ANY COUPLING ASSEMBLY
- ALWAYS USE GRADE 8 FASTENERS PROPERLY TORQUED
- DO NOT APPLY GREASE TO HOOK / HORN OR SADDLE AREA
- AIR SERVICE CHAMBER MUST BE TYPE 24 OR TYPE 30 WITH 90-120 PSI AIR SUPPLY
- CLEAN, INSPECT AND LUBRICATE ALL COUPLING COMPONENTS AT A MINIMUM OF 90 DAY INTERVALS

WARNING!

This envelope contains important instructions AND MUST REMAIN ATTACHED TO THIS HITCH. It may be removed only by the end user or by an Original Equipment Manufacturer who preserves this envelope and instructions and provides it to the end user.

PREMIER MANUFACTURING COMPANY
THE FIRST NAME IN QUALITY COUPLINGS
800-255-5387 (503) 234-9202
www.premier-mfg.com

MODEL 2200

WARRANTY: We warrant all Premier products to be free from defects in material or workmanship for one year. We will repair or replace, at our option, any Premier product which our examination reveals to be defective, provided that the product is returned to our factory, at Portland, Oregon transportation prepaid, within one year of purchase by the first retail purchaser. Our warranty does not extend to products which have been subject to misuse, neglect, improper installation, maintenance or application, nor does our warranty extend to products which have been repaired or altered outside of Premier's facility unless the repair or alteration has been expressly authorized in writing by Premier. ***This warranty is in lieu of all other warranties, express or implied, and excludes warranties of merchantability, fitness for a particular purpose and otherwise, and in no event will Premier be liable for incidental, special, contingent or consequential damages.***

DISCLAIMER: Although great care has been taken to ensure accurate information throughout this catalog, Premier Manufacturing Company must reserve the right to alter any information contained within. These changes include but are not limited to: Dimensional changes, in load capacity and availability of any part or assembly.

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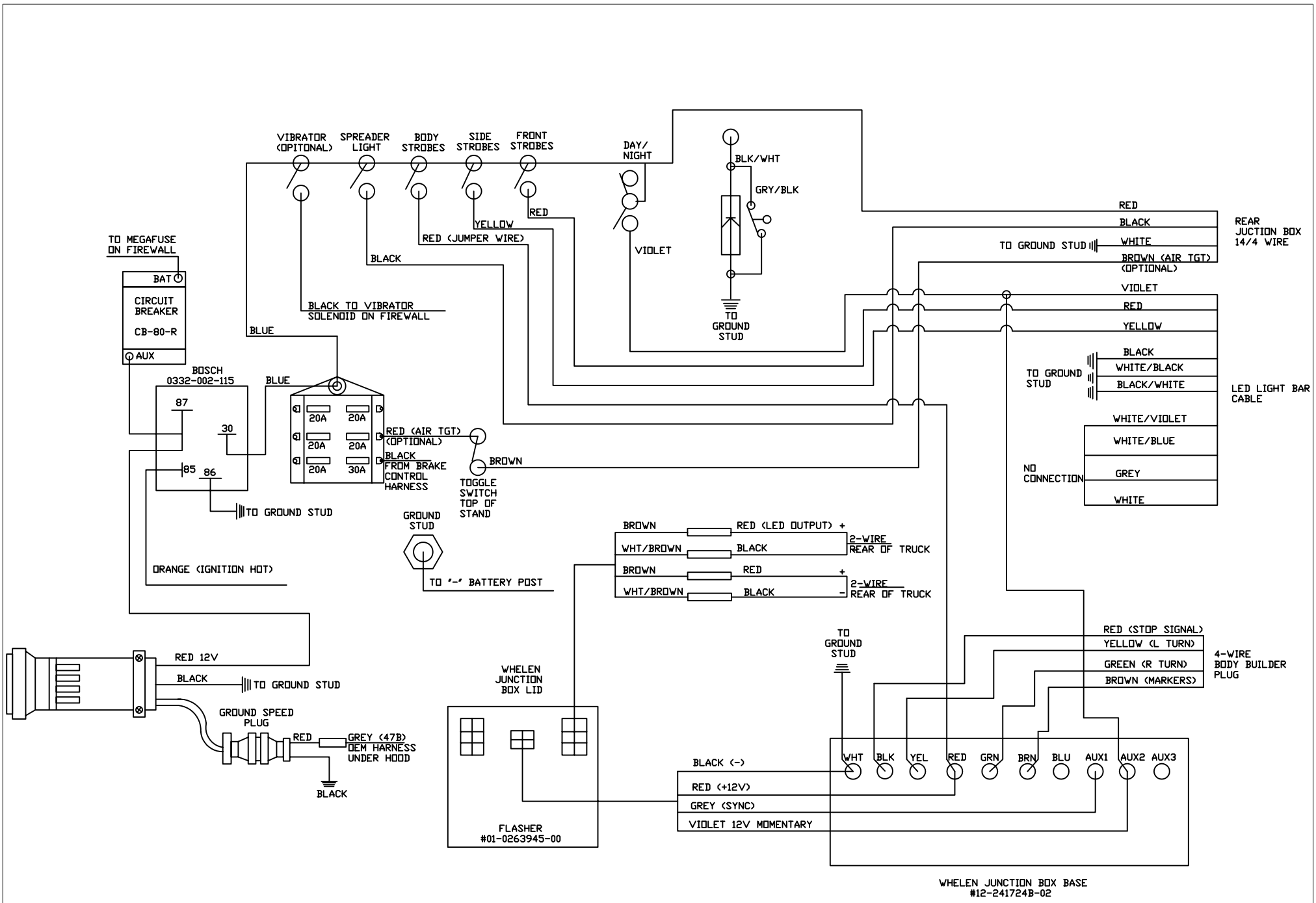
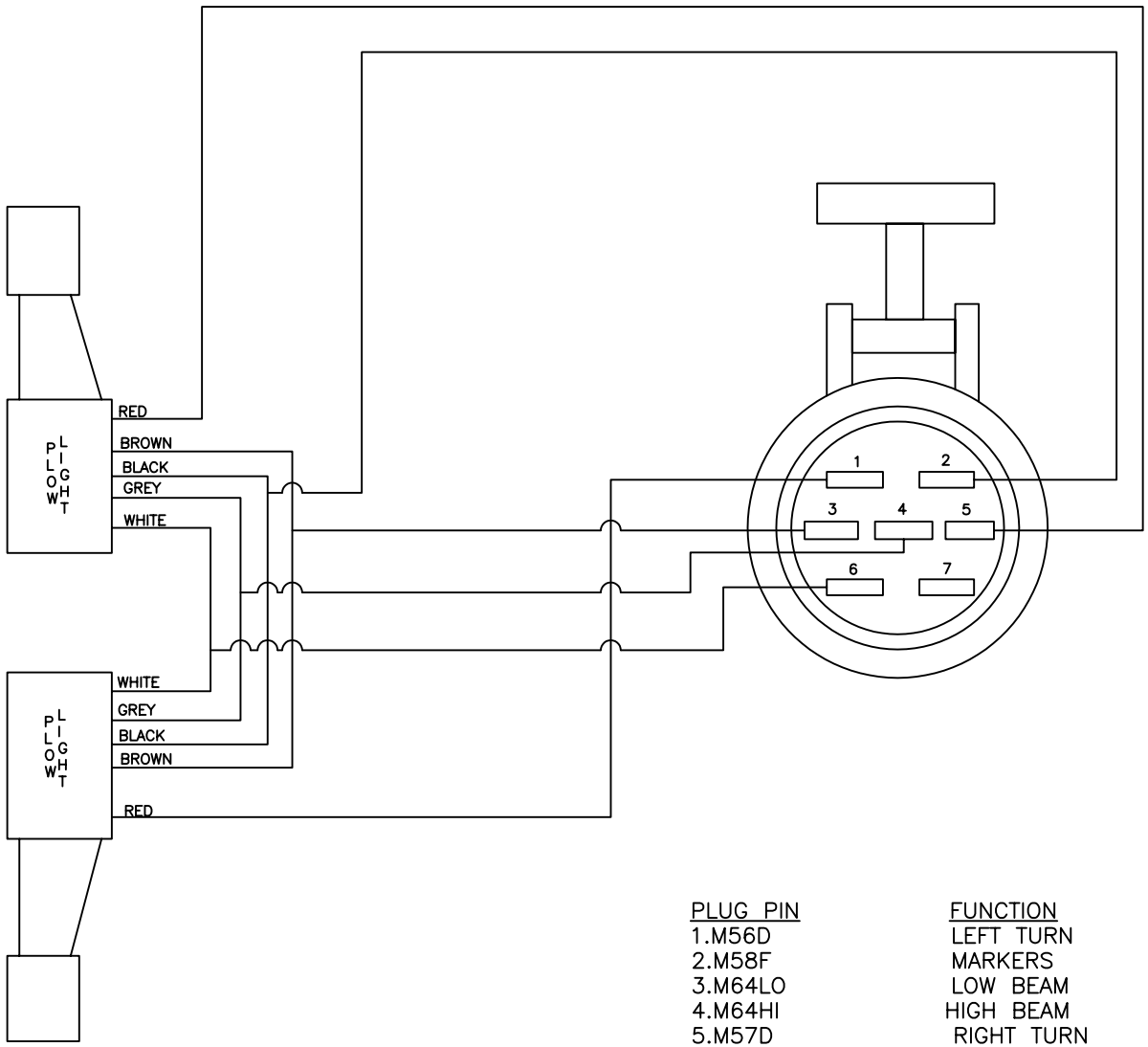
Wheeler Steel & Truck Equipment, Inc.

22956 Highway 61 Morley, MO 63767 Phone: (573) 262-3545 Fax: (573) 262-3369

2006-2007 IDOT
WIRING SCHEMATICS


VIBRATOR (OPITONAL)
SPREADER LIGHT
BODY STROBES
SIDE STROBES
FRONT STROBES
DAY/ NIGHT
BLK/WHT
GRY/BLK
TO GROUND STUD
VIOLET
RED
YELLOW
RED (JUMPER WIRE)
BLACK
BLACK TO VIBRATOR SOLENOID ON FIREWALL
TO MEGAFUSE ON FIREWALL
BAT
CIRCUIT BREAKER
CB-80-R
AUX
BLUE
BOSCH 0332-002-115
87
30
85
86
TO GROUND STUD
20A
20A
20A
20A
20A
30A
RED (AIR TGT) (OPTIONAL)
BLACK FROM BRAKE CONTROL HARNESS
BROWN
TOGGLE SWITCH TOP OF STAND
GROUND STUD
TO '-' BATTERY POST
ORANGE (IGNITION HOT)
RED
BLACK
WHITE
BROWN (AIR TGT) (OPTIONAL)
REAR JUCTION BOX 14/4 WIRE
VIOLET
RED
YELLOW
BLACK
WHITE/BLACK
BLACK/WHITE
TO GROUND STUD
LED LIGHT BAR CABLE
WHITE/VIOLET
WHITE/BLUE
GREY
WHITE
NO CONNECTION
BROWN
RED (LED OUTPUT) +
WHT/BROWN
BLACK
2-WIRE REAR OF TRUCK
BROWN
RED
+
WHT/BROWN
BLACK
-
2-WIRE REAR OF TRUCK
RED 12V
BLACK
TO GROUND STUD
GROUND SPEED PLUG
RED
GREY (47B) OEM HARNESS UNDER HOOD
BLACK
WHELEN JUNCTION BOX LID
FLASHER #01-0263945-00
TO GROUND STUD
RED (STOP SIGNAL)
YELLOW (L TURN)
GREEN (R TURN)
BROWN (MARKERS)
4-WIRE BODY BUILDER PLUG
BLACK (-)
RED (+12V)
GREY (SYNC)
VIOLET 12V MOMENTARY
WHT
BLK
YEL
RED
GRN
BRN
BLU
AUX1
AUX2
AUX3
WHELEN JUNCTION BOX BASE #12-241724B-02



PLUG PIN	FUNCTION	PLOW LIGHT
1.M56D	LEFT TURN	RED
2.M58F	MARKERS	BLACK
3.M64LO	LOW BEAM	BROWN
4.M64HI	HIGH BEAM	GREY
5.M57D	RIGHT TURN	RED
6.M11-GE	GROUND	WHITE
7. NOT USED		

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1. Harness # C14-5/16R-5/16R-36'-Vibrator Wire

36'	# 4 gauge wire
36'	3/8" loom
2	5/16" eyelets
3"	1/2" Heat shrink tubing

2. Harness # C14-1/4R-5/16R-12"-Power Supply to Circuit Breakers (Fire Wall)

12"	# 4 gauge wire
1	5-16" eyelets
1	1/4 eyelet
3"	1/2" heat shrink tubing

3. Harness # C14-5/16R-5/16R-7"-Power Supply to Curcuit Breaker (Fire Wall)

7"	# 4 gauge wire
2	5/16" eyelets
3"	1/2" heat shrink tubing

4. Harness # C-14-1/4R-51/6R-90"-Power Supply from Circiut Breaker to Console

90"	# 4 gauge wire
1	1/4" eyelet
1	5-16" eyelet
3	1/2" heat shrink tubing

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5. Harness # C14-1/4R-3/8R-78"-Ground from Battery to Console

78"	# 4 gauge wire
1	1/4" eyelet
1	3/8" eyelet
3"	1/2" heat shrink tubing

6. Harness # C114-1/4R-96"-Vibrate Switch in Console to Solenoid (Fire Wall)

96"	Single 14 gauge wire
1	1/4" eyelets
96"	1-4" loom
2"	1/4" heat shrink tubing

7. Harness # C714-WP-1/4R-48"-Body Builder Plug to Console

48"	6-14 gauge wire
7	1/4" eyelets
7"	1/4" heat shrink tubing
7	Male box weather pack pins
7	WP insulators

8. Harness # C214-WP-1/4R-226"-Console to Air Tailgate

226"	2-14 gauge wire
2	1/4" eyelets
2"	1/4" heat shrink tubing
2	Femaile WP pins
2	WP insulators
1	2 way male weather pack plug

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9. Harness # C714-1/4R-1/4R-228"-Console Buss Bar to Rear Junction Box

228"	7-14 gauge wire
14	1/4" eyelets
14"	heat shrink tubing

10. Harness # C214-1/4R-14R-36"-Console to Wheeler Junction Box

36"	2-14 gauge wire
3	1/4" eyelets
3"	heat shrink tubing

11. Harness # C214-1/4R-B-120"-Rear Junction Box to Body Limit Switch

120"	2-14 gauge wire
2	14-16 gauge butt connectors
6"	1/4" heat shrink tubing
12"	wire loom
2	1/4" eyelets

12. Harness # C114-1/4R-B-12"-Rear Junction Box to Back-up Alarm

12"	Single 14 gauge wire
1	1/4" eyelets
2"	heat shrink tubing
1	14 gauge butt connector

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13. Harness # C214-WP-1/4R-210"-Rear Junction Box to Rear Marker Lights

168"	2-14 gauge wire
2	1/4" eyelets
2	12-10 gauge butt connectors
6"	1/4" heat shrink tubing
6"	1/2" heat shrink tubing
5	Male 2-way WP plugs
10	WP insulators
1	Female pins

14. Harness # C114-WP-B-1/4R-120"-Rear Junction Box to Rear Spreader Lights

126"	1-14 single wire
1	16-14 gauge butt connectors
1	1/4" eyelet
3"	1/4" heat shrink tubing
2	Female pins
2	WP insulators
2	1-way male weather pack plugs
120"	wire loom

15. Harness # C614-1/4R-WP-36"-Rear Junction Box to Pintle Plate Lights

2	14 gauge butt connectors
2	10 gauge butt connectors
36"	6-14 gauge wire
5	1/4" eyelets
8"	1/4" heat shrink tubing
3"	3/8" heat shrink tubing
8	WP insulators
8	Female pins
2	3-way male WP plugs
1	2-way male WP plugs

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16. Harness # C414-WP-1/4R-15 1/2"-Cab Shield Junction Box to LH STT

15 1/2"	4-14 gauge wire
3	1/4" eyelets
3"	1/4" heat shrink tubing
3	Female WP pins
1	3-way male plug
3	WP insulators

17. Harness # C414R-1/4R-300"-Rear Junction Box to Cab Shield Junction Box

300"	4-14 gauge wire
8	1/4" eyelets
8"	1/4" heat shrink tubing

18. Harness # C414R-1/4R-100"-Cab Shield Junction Box to RH STT

100"	4-14 gauge wire
3	1/4" eyelets
3"	1/4" heat shrink tubing
3	WP insulators
3	Female WP pins
1	4-way male WP plug

19. Harness # C14-5/16R-5/16R-17"

17"	# 4 gauge wire
2	5/16" eyelets
3"	1/2" heat shrink tubing

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20. Harness # C110-1/4R-1/4R-5"-Console Ground to Buss Bar

5"	10 gauge wire
2	1/4" eyelets
2"	1/4" heat shrink tubing

21. Harness # C614-WP-WP-104"-Plow Light Harness

104"	6-14 gauge wire
2	4-way male WP plugs
8	Female WP pins
6	Male box WP pins
14	WP insulators
4	16-14 gauge butt connectors
4	12-10 gauge butt connectors
2	16-14 gauge 5/16" eyelets
13"	1/4" heat shrink tubing
6"	3/4" heat shrink tubing

22. Plow light plug ends

2	4-way Female WP plugs
8	WP insulators
8	Male pins

23. Harness # C14-5/16R-5/16R-22"-Chassis to Body Ground

22"	# 4 gauge wire
22"	3/8" wire loom
2	# 4 gauge 5/16" stud size battery ends
3"	1/2" heat shrink tubing

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24. Harness # C414-B-1/4R-30"

30"	#4 wire 14 gauge
4	16-14 gauge butt connectors
4	1-4" 16-14 gauge eyelets
3"	1/4 heat shrink tubing

25. Harness # C714-1/4R-228"-Non ABS Pigtail

228"	14 gauge 7 wire
7	1/4" eyelets
7	1/4" heat shrink tubing

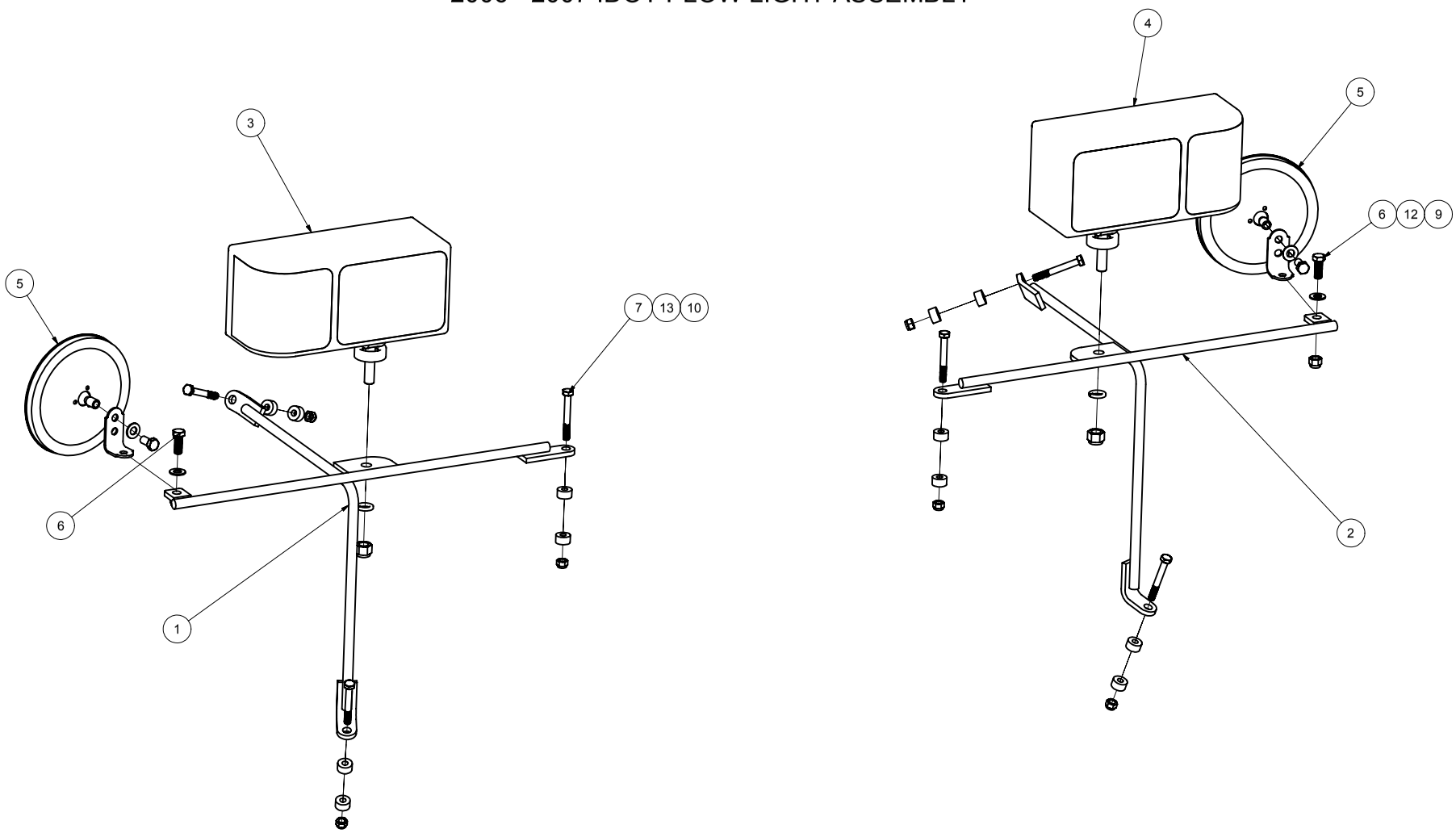
26. Harness # C-414-1/4R-92"-Rear Junction Box to Spreader Tail light Plug

92"	4-14 wire
4	1/4" eyelets
4"	1/4" heat shrink tubing
92"	3/8" wire loom

LEGEND	
C14-5/16R-5/16R-36	
	Qty of wire in cabe
	Gauge of wire
	Size and type of end
	Size and type of end
	Length of cable
R	Ring
WP	Weather Pack
B	Butt Connector

22956 HWY 61 MORLEY, MO 63767 (573)262-3545 PH (573)262-3369 FX

2006 - 2007 IDOT PLOW LIGHT ASSEMBLY



EQUIPMENT MAY NOT BE EXACTLY AS SHOWN. SOME COMPONENTS MAY BE OPTIONAL
TO MAINTAIN OUR ON-GOING PRODUCT AND DEVELOPMENT IMPROVEMENT PROGRAM, VIKING-CIVES RESERVES THE RIGHT TO CHANGE EQUIPMENT & SPECIFICATION WITHOUT NOTICE.

This Owner's Manual File is Contained Within 41301028.idw

Wheeler Steel & Truck Equipment, Inc.

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LIGHT BRACKETS & PLOW LIGHTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	41303004		Plow light bracket weldment passenger side	1
2	41303004-1		Plow light bracket weldment driver side	1
3	SK6010TLN		Plow light passenger side	1
4	SK6010TLN		Plow light driver side	1
5	43901000		Convex mirror IDOT	2
6	HW40A-0608		Bolt hex 3/8 x 1 UNC zinc	2
7	HW40A-0520		Bolt hex 5/16 x 2 ½ UNC zinc	6
8	3SSK3670		Nut hex toplock ½" UNC zinc	2
9	3SK3591	81086C	Nut hex toplock 3/8 UNC zinc	2
10	HW36D-05	HH-00340-017	Nut hex elastic 5/16 UNC zinc	6
11	HW14C-08	81080	Lockwasher split ½ zinc	2
12	3SK3595		Flatwasher SAE 3/8 zinc	2
13	41325000 (B755R)		Rubber bushing IDOT light bracket	12

WHELEN®
ENGINEERING COMPANY INC.
Route 145, Winthrop Road,
Chester, Connecticut 06412
Phone: (860) 526-9504
Fax: (860) 526-4078
Internet: www.whelen.com
OEM Sales e-mail: autooem@whelen.com
Canadian Sales e-mail: autocan@whelen.com
Customer Service e-mail: custserv@whelen.com

System Overview
Illinois DOT System Model:
ILDOTL2K (01-0617049-05)

Automotive: D.O.T.

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **If this product contains strobe light(s), halogen light(s) or high-intensity LEDs, do not stare directly into these lights at a close distance. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lens in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

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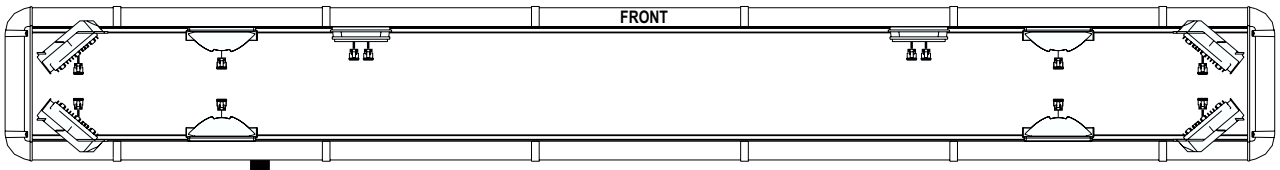
Form No.13732G (102005)

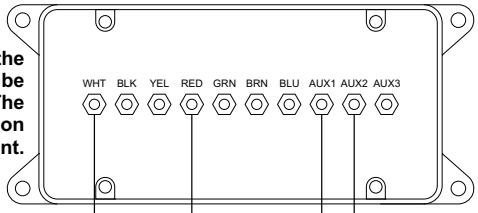


CONTROL CABLE

- **BLACK -** Rear LED Ground
- **WHT/BLK -** Front LED Ground
- **YELLOW -** Front LED / +12 volts
- **WHT/VIO -** No Connection
- **WHT/BLU -** No Connection
- **VIOLET -** Low Power
- **RED -** Rear LED / + 12 volts
- **BLK/WHT -** Work Light Ground
- **BLK/YEL -** Work Light / + 12 volts
- **GREY -** Work Light Ground (2nd set)
- **WHITE -** Work Light / + 12 volts (2nd set)

LOW POWER / VIOLET The type of switch used is dependant on how the operator wishes the Hi/Lo feature to function:
Latching Mode: By applying +12 VDC voltage to the Violet wire for less than 1 sec., the power supply is "latched" into low power operation. The unit must be turned off and then back on to restore normal, Hi power operation. (A momentary switch is preferred)
Level Mode - Applying +12 VDC voltage to the Violet wire for more than 1 sec. holds the power supply in low power mode until voltage is removed. (A toggle switch is preferred)

IMPORTANT! Do NOT mount the Junction Box where it could be exposed to moisture. The recommended mounting location is within the passenger compartment.



CONTROL WIRES:
Applying +12 VDC to a control wire, will enable that wires function. These wires may be controlled with a (customer supplied) switch box.
IMPORTANT:
All wires that connect to the positive terminal of the battery, must be sized to supply at least 125% of the maximum operating current and fused at the battery to carry that load.

ALL SWITCHES, FUSES & WIRES ARE CUSTOMER SUPPLIED.

LED FLASHER ASS'Y

- BLK - GROUND (-)
- RED - +12V (+)
- GREY - SYNC
- VIO - +12V MOMENTARY

BACKUP
400 LED Flush Mount
- WHT - TO VEHICLE REVERSE LIGHTS
- BLK - TO CHASSIS GROUND

CLEARANCE DRIVER SIDE
300 LED
- RED - TAIL LIGHT (+)
- BLK - GROUND (-)

STOP-TAIL-TURN DRIVER SIDE
600 LED Flush Mount
- BRN - TAIL LIGHT (+)
- YEL - STOP & LEFT TURN SIGNAL
- WHT - GROUND (-)

CLEARANCE
300 LED
- RED - TAIL LIGHT (+)
- BLK - GROUND (-)

BRN - RED
WHT/BRN - BLK
BRN - RED
WHT/BRN - BLK

STOP-TAIL-TURN DRIVER SIDE
600 LED Flush Mount
- BRN - TAIL LIGHT (+)
- YEL - STOP & LEFT TURN SIGNAL
- WHT - GROUND (-)

- BRN - TO TAIL LIGHT (+)
- YEL/GRN - TO STOP & LEFT TURN SIGNAL
- WHT - TO GROUND (-)
- WHT/BLK - NOT USED
- BLU - NOT USED

STOP-TAIL-TURN PASSENGER SIDE
600 LED Flush Mount
- BRN - TAIL LIGHT (+)
- YEL - STOP & RIGHT TURN SIGNAL
- WHT - GROUND (-)

- BRN - TO TAIL LIGHT (+)
- YEL/GRN - TO STOP & RIGHT TURN SIGNAL
- WHT - TO GROUND (-)
- WHT/BLK - NOT USED
- BLU - NOT USED

CLEARANCE PASSENGER SIDE
300 LED
- RED - TAIL LIGHT (+)
- BLK - GROUND (-)

STOP-TAIL- TURN PASSENGER SIDE
600 LED Flush Mount
- BRN - TAIL LIGHT (+)
- YEL - STOP & RIGHT TURN SIGNAL
- WHT - GROUND (-)

CLEARANCE
300 LED
- RED - TAIL LIGHT (+)
- BLK - GROUND (-)

CLEARANCE
300 LED
- RED - TAIL LIGHT (+)
- BLK - GROUND (-)

- BLK - LED OUTPUT (-)
- RED - LED OUTPUT (+)
- RED - LED OUTPUT (+)
- BLK - LED OUTPUT (-)

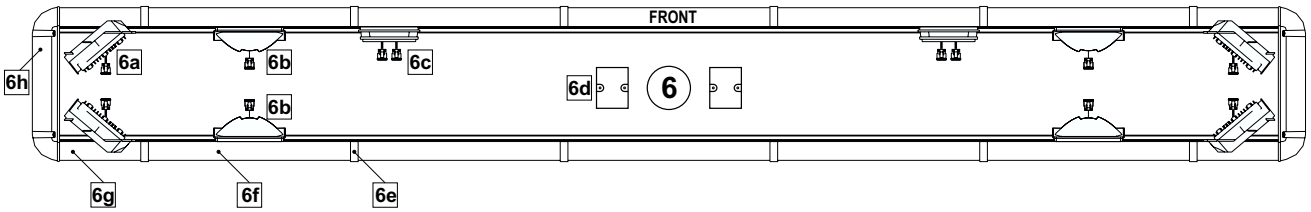
RED - 1
BLK - 2
2 POS.
700 SERIES LED

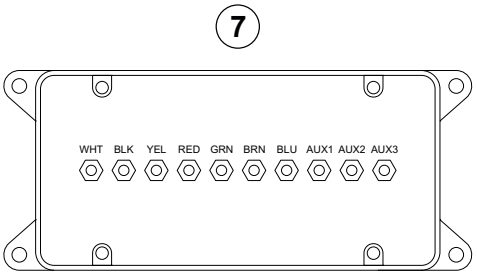
BRN - C
YEL/GRN - B
WHT - A
3 POS.
LED: STOP TAIL TURN
- BLU / NOT USED
- WHT-BLK / NOT USED

IMPORTANT! Rear housings should be mounted in a full upright, vertical position

2 POS. 2 - BLK, 1 - RED
700 SERIES LED

3 POS. C - WHT, B - YEL/GRN, A - BRN
LED: STOP TAIL TURN
- BLU / NOT USED
- WHT/BLK - NOT USED


FRONT
6h
6a
6b
6c
6d
6
6b
6g
6f
6e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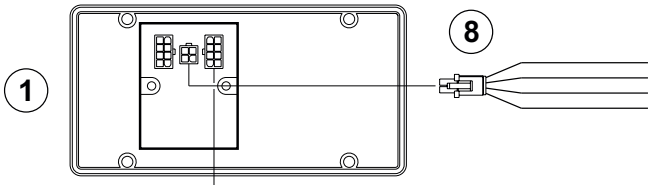
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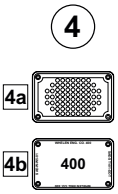
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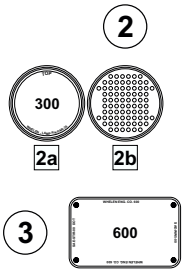
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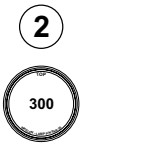
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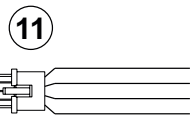
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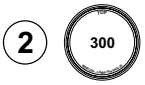
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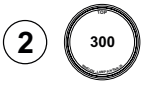
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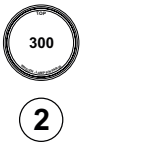
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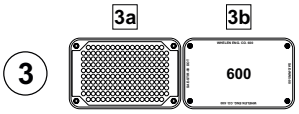
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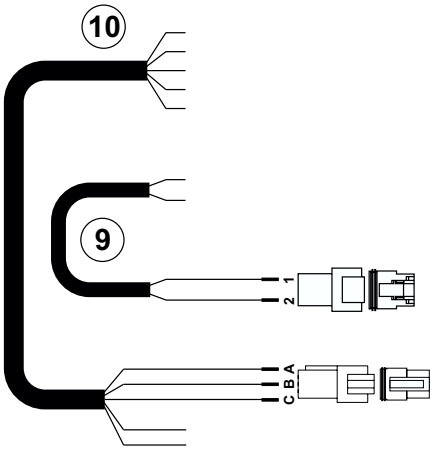
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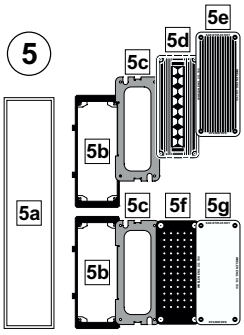
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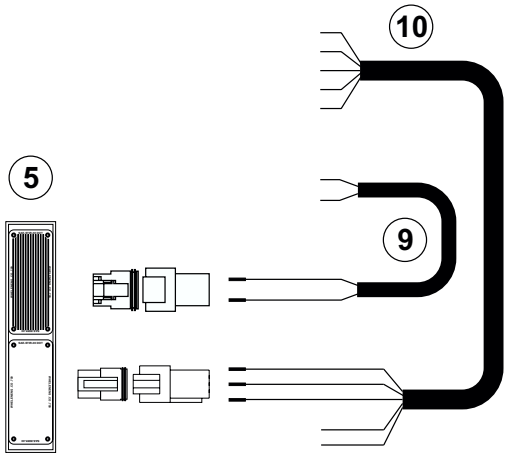
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2004 ILLINOIS LED DOT SYSTEM PARTS LIST

QTY	*PER*	ITEM	PART NUMBER	DESCRIPTION
			01-0617049-05	ILLINOIS LED DOT SYSTEM (2004)
1		**1**	**01-0263945-00**	**FLASHER - DOT/SINGLE**
5		**2**	**01-06631398RR**	**300-SERIES LED CLEARANCE LIGHT - RED**
	1	**2a**	*01-0263314-50*	*300-SERIES LED ASSEMBLY - RED*
	1	**2b**	*68-3983473-5S*	*300-SERIES LENS, NON-OPTIC - RED*
4		**3**	**01-0683719BR0**	**600-SERIES LED FLUSH MOUNT - RED**
	1	**3a**	*01-0283460-5B*	*600-SERIES LED B/T/T ASSEMBLY*
	1	**3b**	*68-3183587-50*	*600-SERIES LENS, NON-OPTIC - RED*
1		**4**	**01-06837597C0**	**400-SERIES LED BACK-UP - WHITE**
	1	**4a**	*01-0283458-37*	*400-SERIES LED BACK-UP ASSEMBLY*
	1	**4b**	*68-1183726-3S*	*400-SERIES LENS, OPTIC - CLEAR*
2		**5**	**01-0683920-AX**	**DOT 700-SERIES "B" - AMBER**
	1	**5a**	*11-480519-000*	*HOUSING, STEEL (DUAL)*
	2	**5b**	*11-481648-000*	*MOUNTING FACEPLATE*
	2	**5c**	*07-763513-023*	*BACK PLATE*
	1		***01-0663913-A4***	***700-SERIES LINEAR TIR LED (VERTICAL)***
	1	**5d**	*02-0363888214*	*700-SERIES LINEAR TIR ASSEMBLY*
	1	**5e**	*68-1983929-1S*	*700-SERIES LENS, OPTIC - AMBER*
	1		***01-0683718BR1***	***700-SERIES FLUSH MOUNT***
	1	**5f**	*02-038346115B*	*700-SERIES LED B/T/T ASSEMBLY (MAX)*
	1	**5g**	*68-3183573-5S*	*700-SERIES LENS, NON-OPTIC - RED*
1		**6**	**01-0684061-00***	**ILDOT FREEDOM LIGHTBAR**
	4	**6a**	*01-0263814-1D*	*CORNER LINEAR LED*
	2	**6b**	*02-0383709-04*	*700-SERIES WORK LIGHT (OPTIONAL)*
	2	**6c**	*02-0363769411*	*400-SERIES SPLIT LED*
	2	**6d**	*01-0269857-1S*	*2 CH. LED FLASHER*
	12	**6e**	*02-0341448-00*	*LENS DIVIDER (w/GASKETS)*
	10	**6f**	*68-1984105-10*	*LENS, OPTIC - AMBER (15.75")*
	4	**6g**	*68-1983817-10*	*CORNER LENS, OPTIC - AMBER (6.562")*
	2	**6h**	*68-1183369-10*	*ENDCAP, AMBER*
1		**7**	**12-3417248-02**	**JUNCTION BOX BASE**
1		**8**	**46-0743141-00**	**DOT LED FLASHER INTER-CONNECT CABLE**
2		**9**	**46-0764072-00**	**CABLE - 2 CONDUCTOR (30')**
2		**10**	**46-0764073-15**	**CABLE - 5 CONDUCTOR (15')**
1		**11**	**46-0769852-12**	**OUTPUT 1 HARNESS**

***Illinois Freedom Lightbar 01-0684061-01 includes optional worklights**

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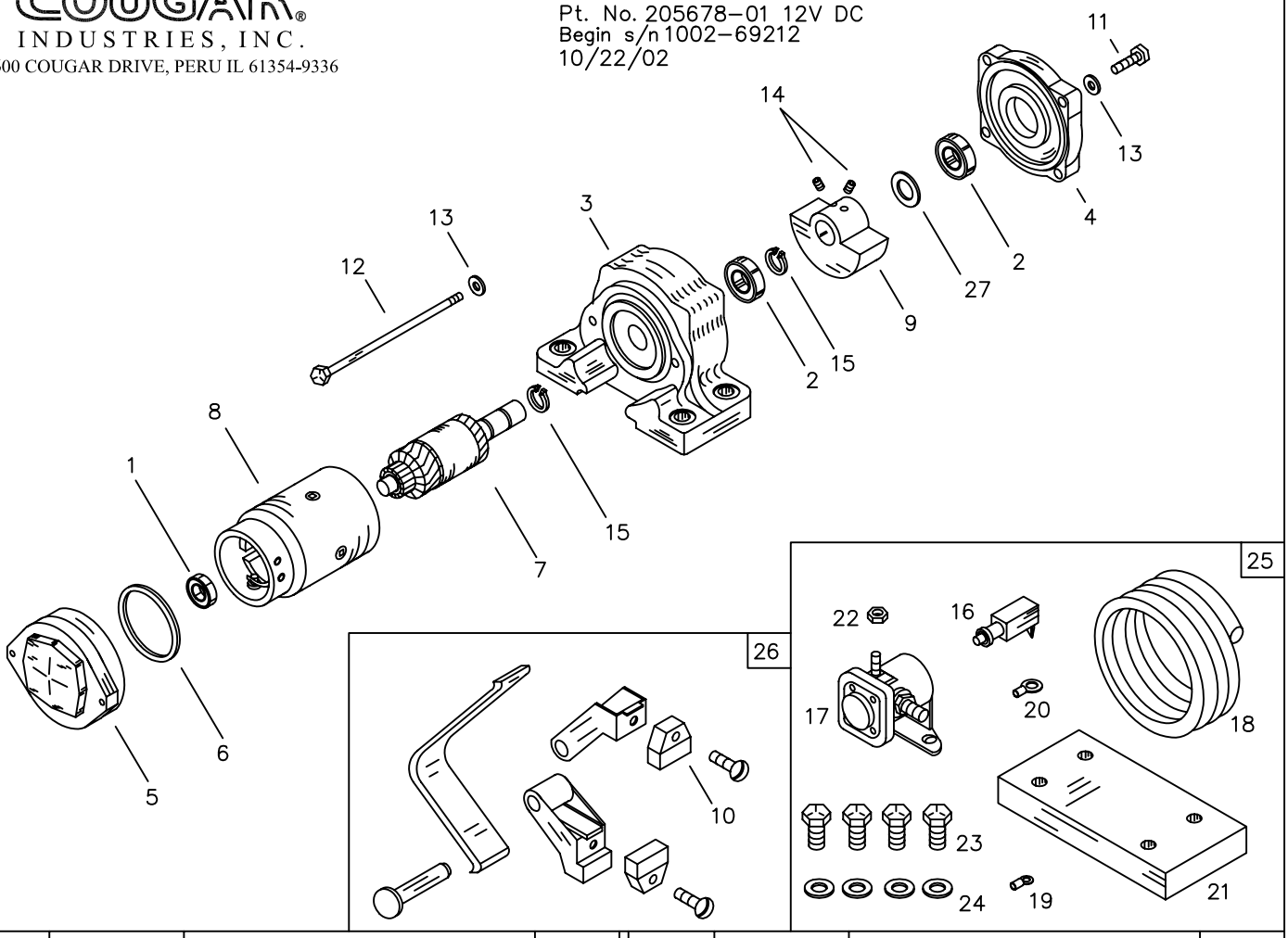
2006-2007
IDOT VIBRATOR

COUGAR®
INDUSTRIES, INC.
3600 COUGAR DRIVE, PERU IL 61354-9336

DC–3200
Pt. No. 205678–01 12V DC
Begin s/n 1002–69212
10/22/02

205678–01



Item No.	Part No.	Description	No. Req.	Item No.	Part No.	Description	No. Req.
1.	100107	Bearing	1	20.	195902	Terminal	1
2.	100104	Bearing	2	21.	220526	Mount plate	1
3.	110280	Housing	1	22.	519198	Nut	1
4.	120171	Endbell	1	23.	500262	Bolt	4
5.	120195	Endbell	1	24.	517705	Compression Washer	4
6.	130006	Gasket	1	25.	221620	Mount kit	1
7.	150375	Armature	1	26.	190148	Brush Kit	1
8.	167537	Fields with Brushes	1			(Kit contains 2 of each component shown)	
9.	170715	Weight	1				
10.	190147	Brush(set of 4)	1				
11.	500080	Bolt	4	27.	100285	Bearing Spacer	1
12.	500111	Bolt	2				
13.	517696	Compression Washer	6				
14.	519898	Set Screw	2		200411	Vib only (12 v.)	
15.	530313	Snap ring	2				
16.	193501	Switch	1				
17.	193751	Solenoid	1				
18.	195103	Cable(ft.)	40				
19.	195901	Terminal	3				

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NOTES

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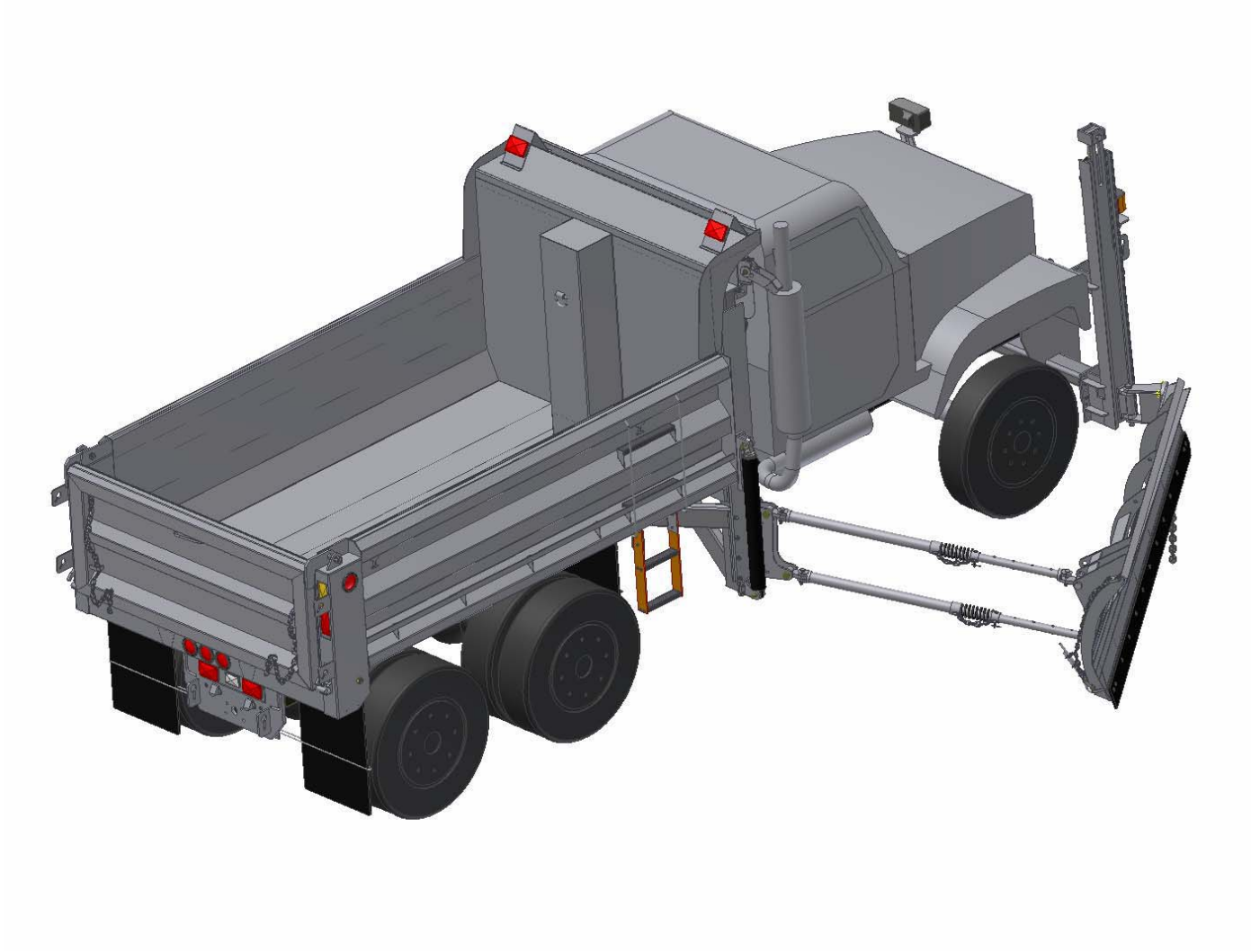
2006-2007 IDOT BENCHING WING



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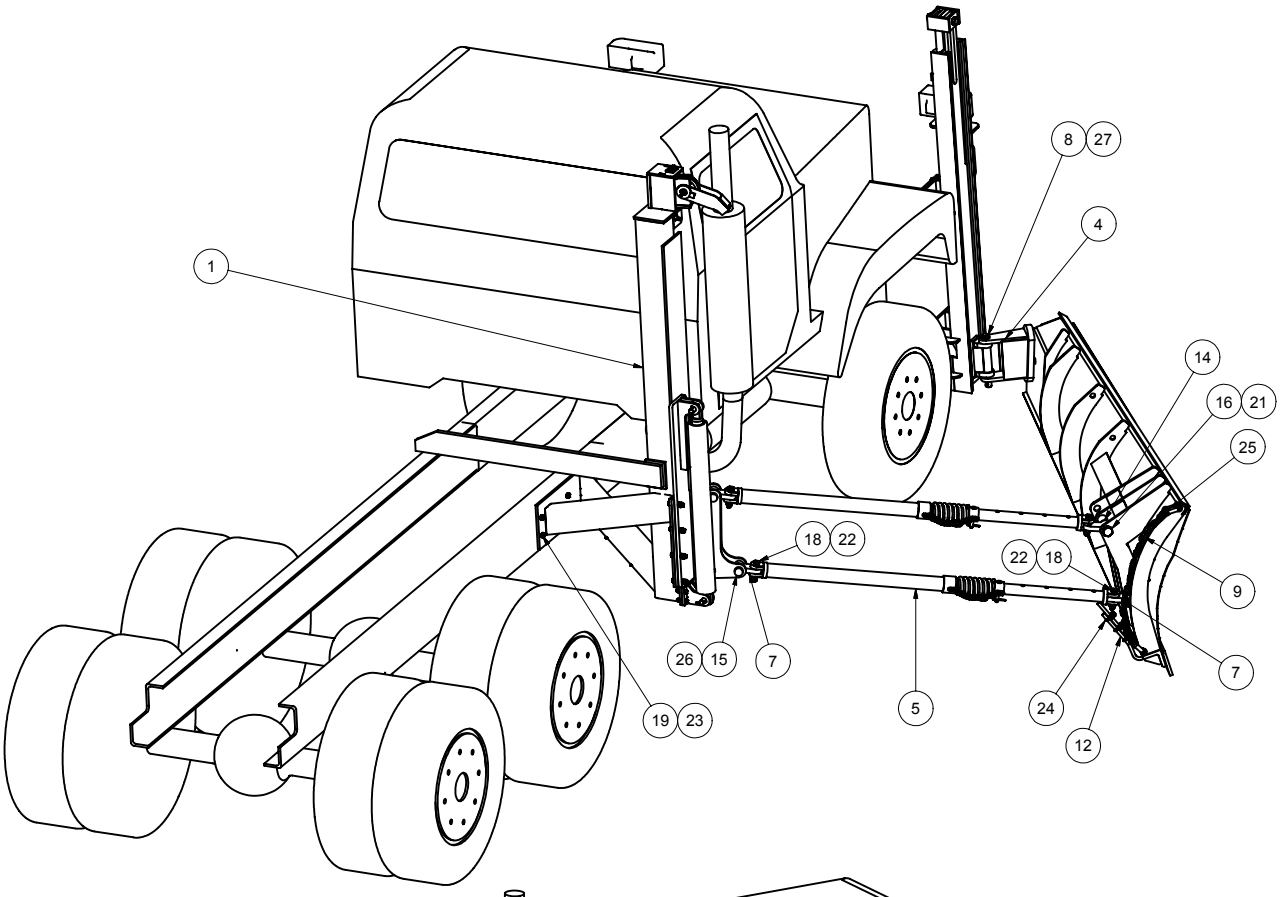
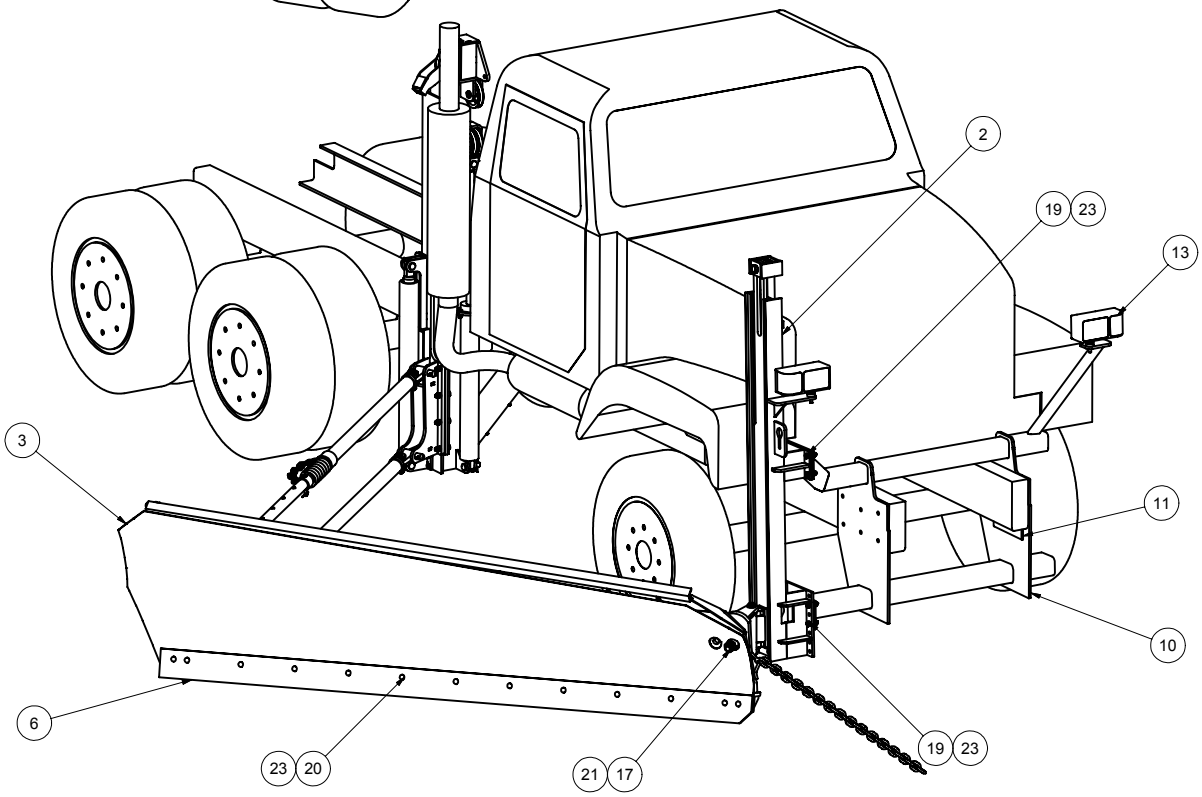
IDOT 12' BODY BENCHING WING ASSEMBLY
PART #21401015





EQUIPMENT MAY NOT BE EXACTLY AS SHOWN. SOME COMPONENTS MAY BE OPTIONAL
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BENCHING WING ASSEMBLY PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	21001000		Benching wing rear mast slide weldment	1
2	S31700		60” Front wing mast assembly	1
3	21403022		Standard MW 11’ cutting edge wing	1
4	10703022		Hinge front mast 5 deg ext 5 ¾	1
5	01202000		Metro 225 lower stand off arm assembly	2
6	280055A		Blade 5/8 x 8 x 132 (2” top punch)	1
7	201201044		Pivot block 3.500 x 0.813 dia	4
8	10908013		Pin 1 ¼ x 10 3.8 UH to CH	1
9	20590007		Chain 3/8 Grade 70 transport 27 links	1
10	40305003		IDOT hitch cheek plate benching wing	2
11	200401494		Angle 3 x 3 x 3/8 – 11	2
12	21015000		5/8”wire rope 30’ long one end swedged	1
13	645WK		Plow lights	2
14	21429001		Wing plow standoff arm spacer tube	2
15	20P010		Pin 1 ¼ x 4 3/8 UH	2
16	281023G	81016A	Bolt hex 1 ¼ x 7 ½ UNC zinc	2
17	281023C-V	81023C	Bolt hex 1 ¼ x 6 UNC zinc	1
18	3SK3807	81068E	Bolt hex ¾ x 4 UNC zinc	4
19	SK3700	81073D	Bolt hex 5/8 x 2 UNC zinc	14
20	2N81074	81074C	Bolt plow 5/8 x 3 UNC zinc	13
21	281007B	80999D	Nut hex toplock 1 ¼ UNC zinc	3
22	3SK3811		Nut hex toplock ¾ UNC zinc	4
23	SK3781		Nut hex toplock 5/8 UNC zinc	27
24	2180525		Wire cable clamp	3
25	3SK3488		½” midlink	2
26	280569A		Roll pin 3/8 x 2 ½ zinc	2
27	3SK3450	80508A	Cotter pin ¼ x 2 ½ zinc	1

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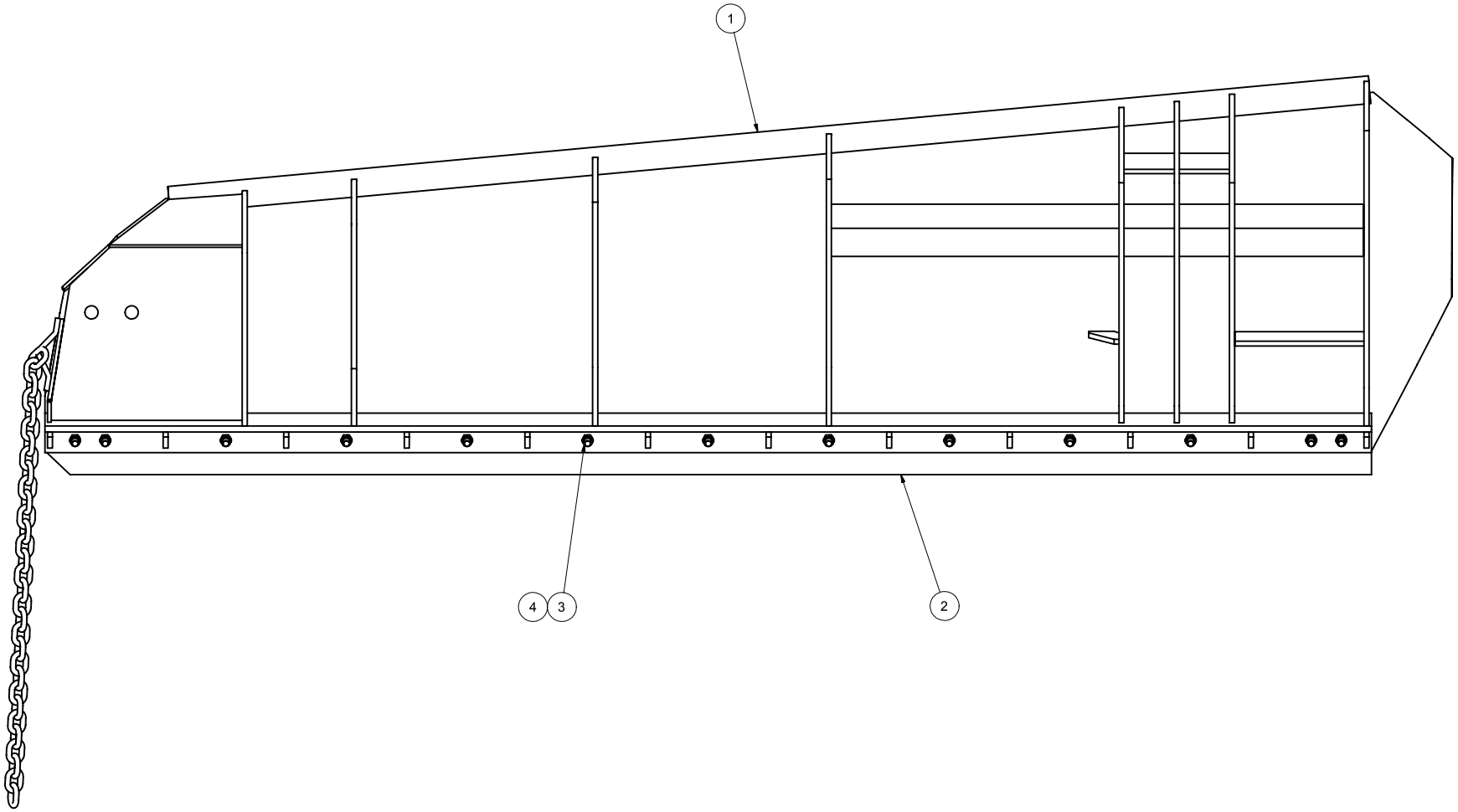
STANDARD MW 11' CUTTING EDGE WING ASSEMBLY
PART #21401054



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MW 11' STANDARD WING PARTS

Item	Drawing No.	Alt. Item No	Description	Qty
1	21403022		Standard MW 11' cutting edge wing	1
2	25000022		Blade 5/8 x 8 x 132 (2" top punch)	1
3	2N81074	81074C	Bolt plow 5/8 x 3 UNC zinc	13
4	SK3781		Nut hex toplock 5/8" UNC zinc	13

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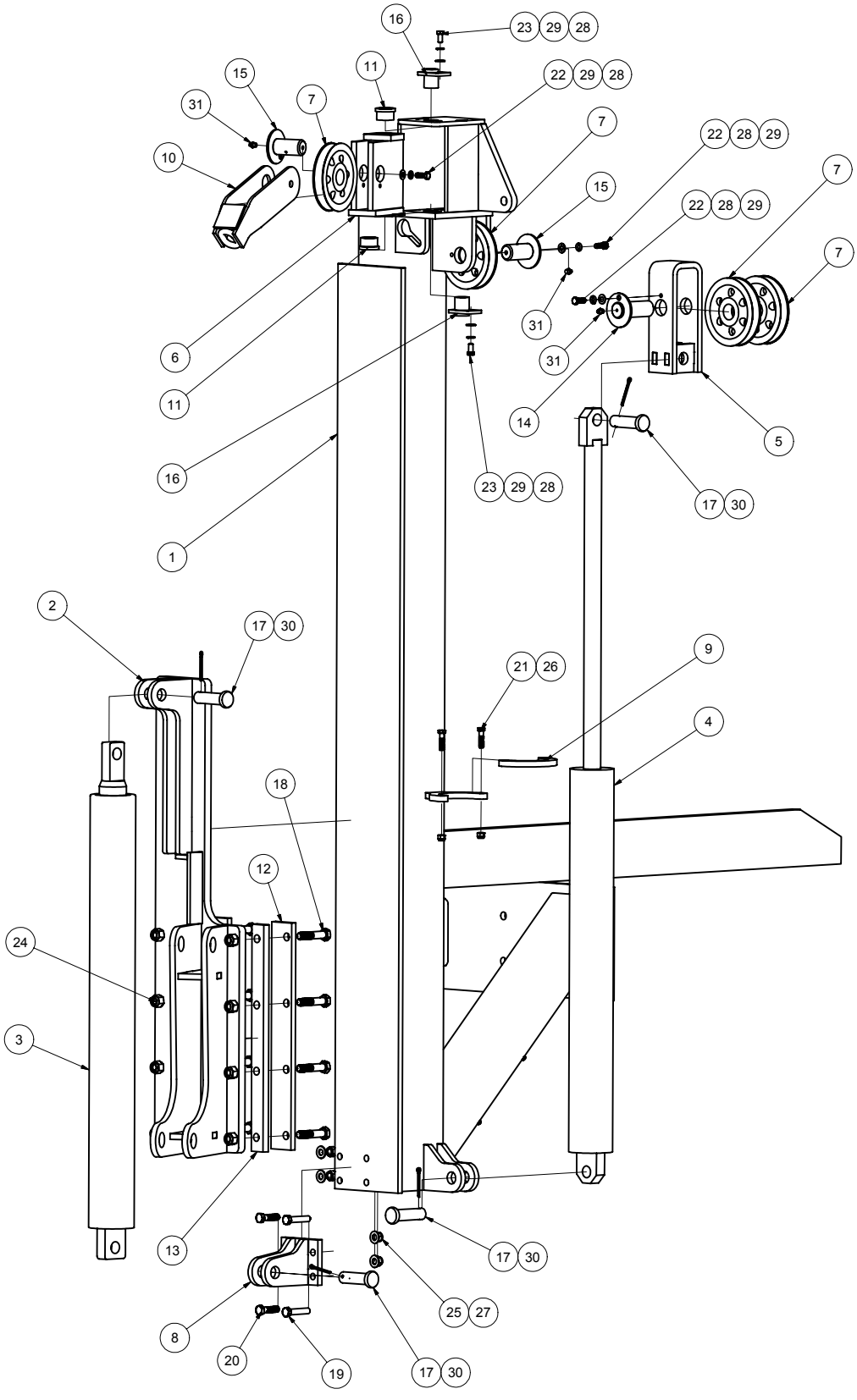
VIKING 60" BENCHING WING REAR TOWER ASSEMBLY
PART #21001000



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REAR TOWER 60" BENCHING WING PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	21001000		Rear post weldment	1
2	21003006		Rear post slide weldment	1
3	180167D		Cylinder 3 x 58 telescopic DA	1
4	2180159		Cylinder 3 x 28 DA	1
5	11003060		Sheave housing 6" double H300	1
6	11003061		Sheave housing assembly 6" swivel single	1
7	180465		Sheave 6"	4
8	21003260		Lower cylinder attaching lug weldment	1
9	21004002		Retracting cylinder retaining bracket	1
10	11003004		Cable guide weldment	1
11	180480A		Brass bushing	2
12	21005001		Plate 2.500 x 20.000 x 0.500	2
13	21005000		Plate 1.250 x 20.000 x 0.625	2
14	10903045		Pin grease 1 3/8 x 3 ½ UH to end	1
15	10903007		Pin grease 1 3/8 x 2 5/8 UH to end	2
16	10903039		Pin 1 ¼ x 1 1/8 UH to end	2
17	3SK3400		Pin 1 x 3 ½	4
18	3SK3711		Bolt hex 5/8 x 3 UNC zinc	8
19	3SK3620		Bolt hex ½ x 2 ½ UNC zinc	2
20	3SK3610	81083	Bolt hex ½ x 2 UNC zinc	2
21	3SK3585	81091	Bolt hex 3/8 x 1 ½ UNC zinc	2
22	218834		Bolt hex 3/8 x 1 UNC zinc	3
23	218832		Bolt hex 3/8 x ¾ UNC zinc	2
24	SK3781		Nut hex toplock 5/8 UNC zinc	8
25	3SK3670		Nut hex toplock ½ UNC zinc	4
26	3SK3591	81086C	Nut hex toplock 3/8 UNC zinc	2
27	3SK3661		Flatwasher SAE ½ zinc	4
28	3SK3595		Flatwasher SAE 3/8 zinc	5
29	3SK3587		Lockwasher split 3/8" zinc	5
30	3SK3450	80508A	Cotter pin ¼ x 2 ½ zinc	4
31	280577	80577	Grease fitting 1/8 NPT STR	3

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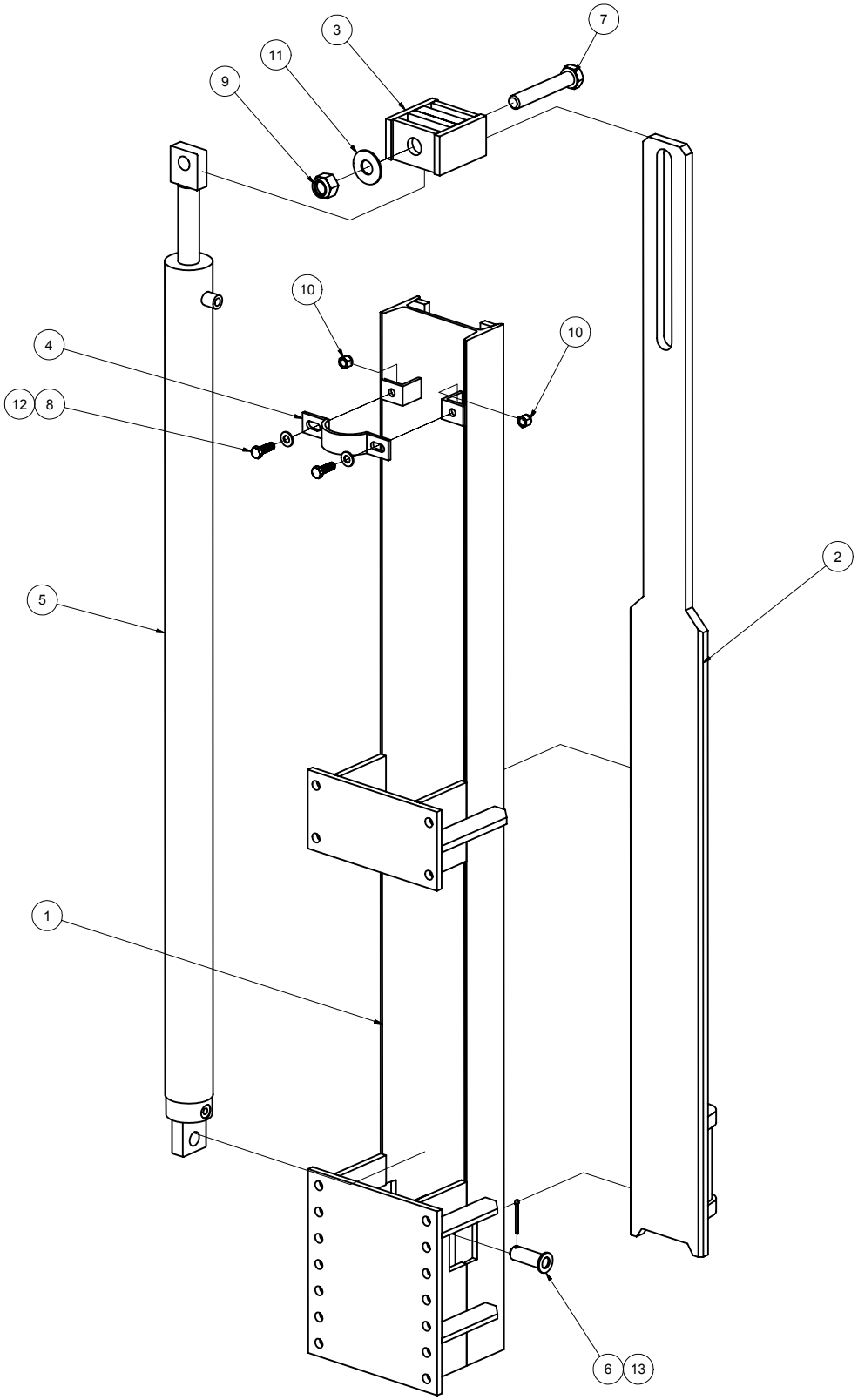
VIKING 60" FRONT MAST ASSEMBLY
PART #S31700



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FRONT MAST 60” BENCHING WING PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	10703072		Front mast weldment AH H200 3 x 60 cyl	1
2	10703071		Slide AH H200 3 x 60 cyl weldment	1
3	10703052		Coupler AH H200 coupler	1
4	10703053		Clamp cyl mounting weldment	1
5	180134		Cylinder 3 x 60 DA	1
6	10908034		Pin 1 x 2 9/16 UH to CH	1
7	215475		Bolt hex 1 x 6 UNC zinc	1
8	3SK3600		Bolt hex ½ x 1 ½ UNC zinc	2
9	237278		Nut hex toplock 1” UNC zinc	1
10	3SK3670		Nut hex toplock ½” UNC zinc	2
11	281013A	81013A	Flatwasher SAE 1” zinc	1
12	3SK3661		Flatwasher SAE ½ zinc	2
13	3SK3450	80508A	Cotter pin ¼ x 2 ½ zinc	1

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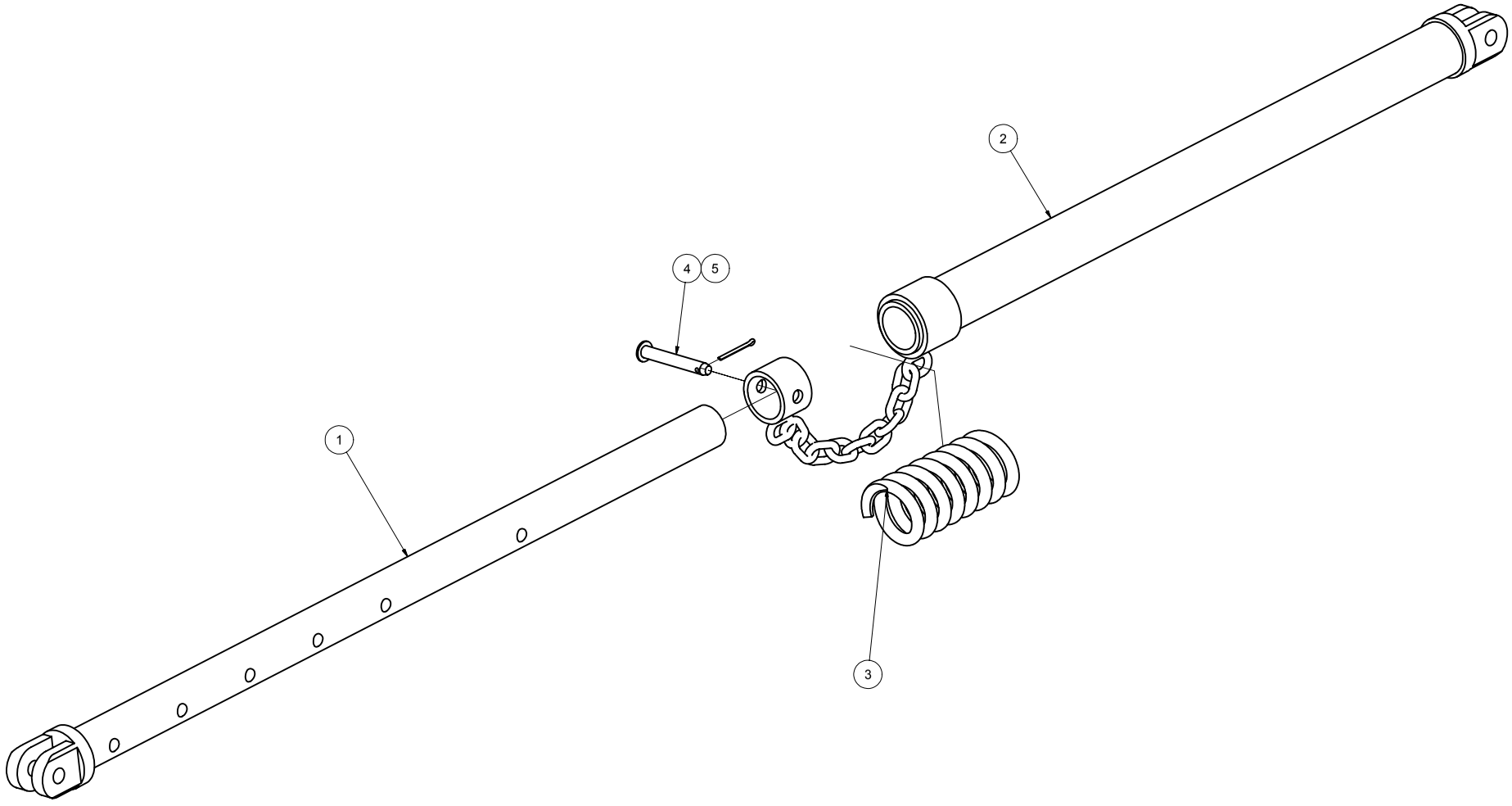
MW 225 LOWER STANDOFF ARM ASSEMBLY
PART #201202000



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REAR STANDOFF ARM PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	01201051		Inner bar weldment MW 225 Stand off arm	1
2	01201047		Outer arm weldment MW 225 Stand off arm	1
3	0580009		MW 225 wing comp spring	1
4	00900087		Pin 0.625 dia x 4.000 weldment	1
5	3SK3450	80508A	Cotter pin ¼ x 2 ½ zinc	1

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2006-2007 IDOT 7’ MID-MOUNT TRIP EDGE WING

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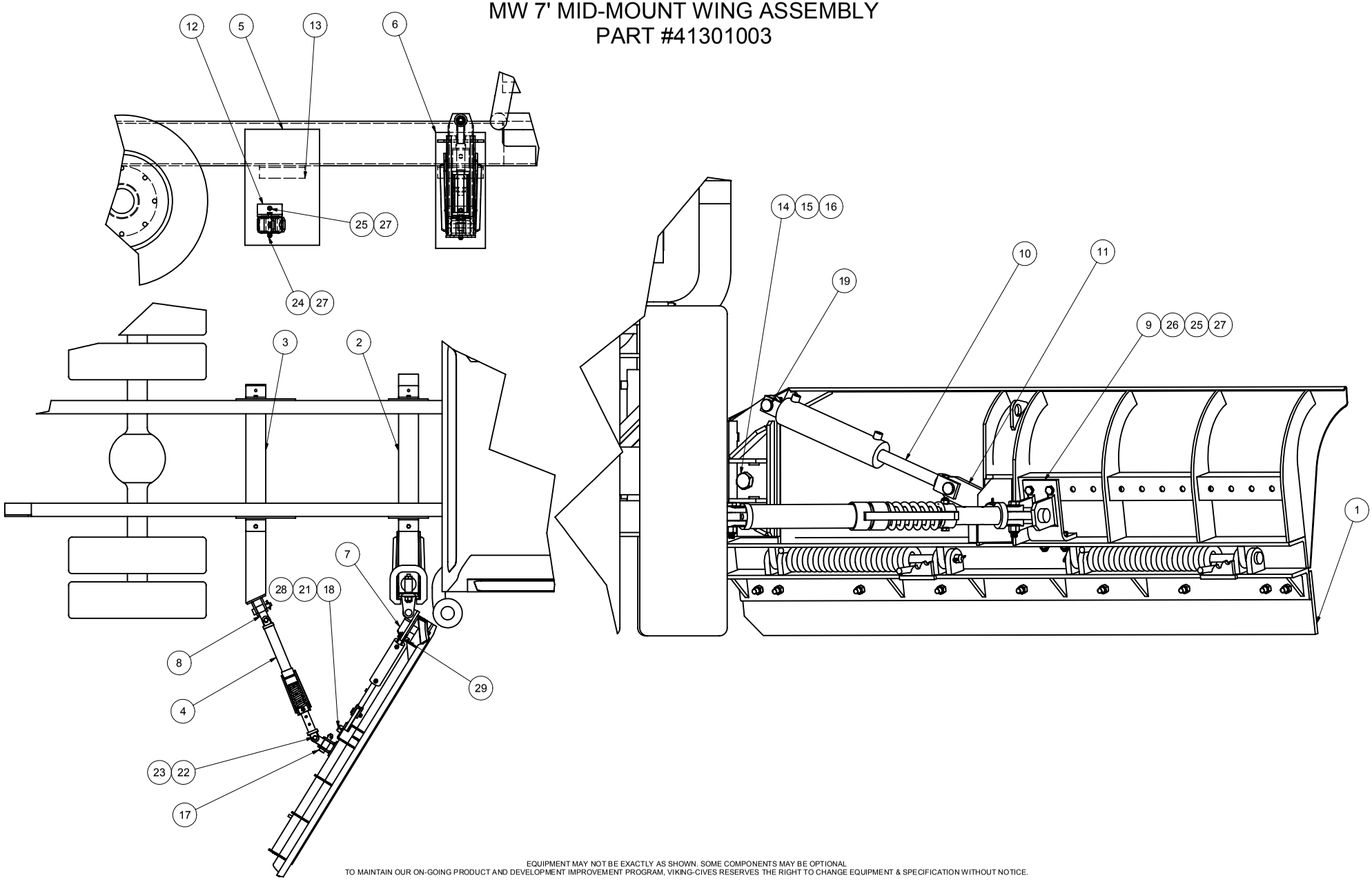
MW 7' MID-MOUNT WING ASSEMBLY
PART #41301003



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This Owner's Manual File is Contained Within IDOT 7' MID-MOUNT WING LA

Wheeler Steel & Truck Equipment, Inc.

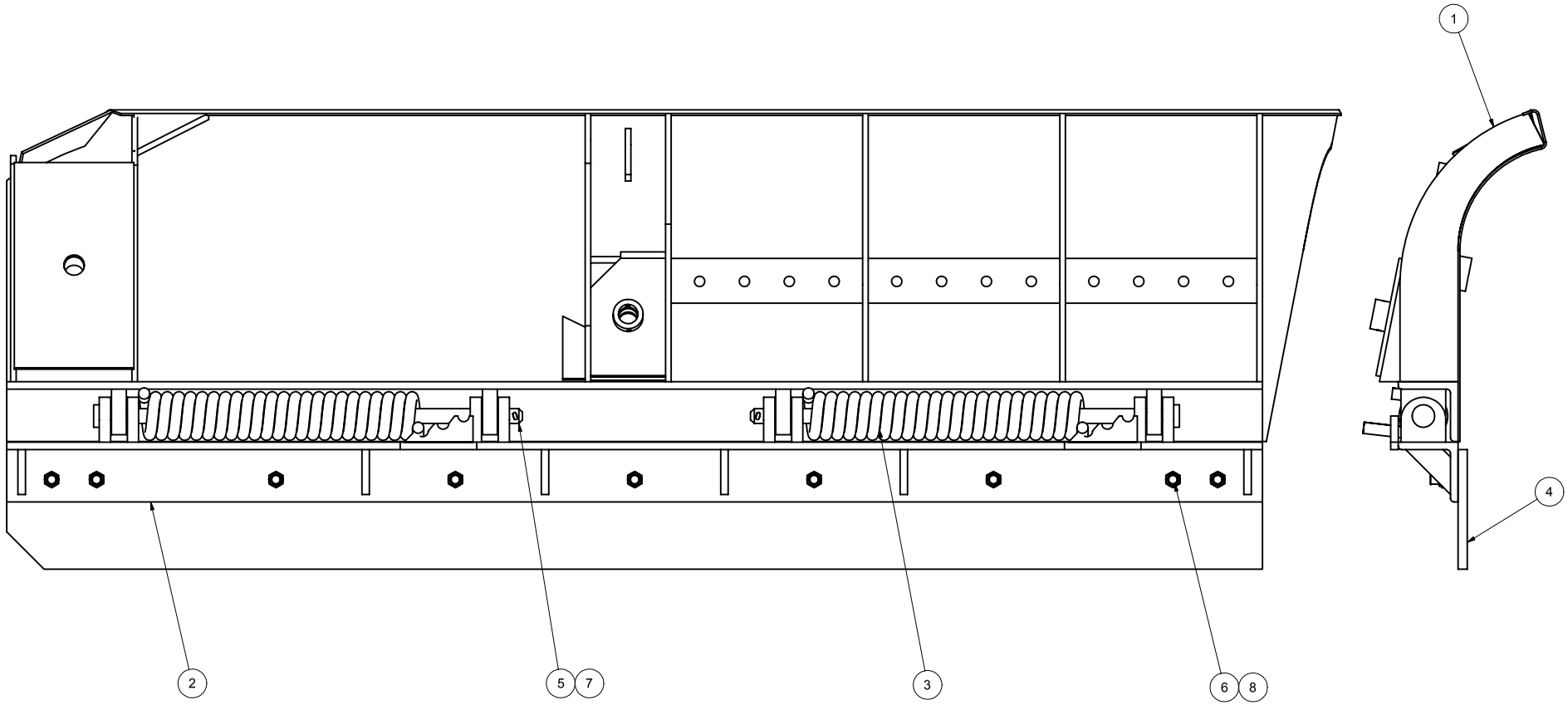
22956 Highway 61 Morley, MO 63767 Phone: (573) 262-3545 Fax: (573) 262-3369

7’ MIDMOUNT TRIP EDGE ASSEMBLY PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	21401051		7’ AHW-025 trip edge mid-mount wing	1
2	201001176		Wing post assembly AHW-025	1
3	201001178		Rear cross tube weldment	1
4	201201065		Push arm AHW-025	1
5	201001177		Plate 18.000 x 28.000 x 0.500	2
6	201001170		Plate 12.000 x 28.000 x 0.500	2
7	201001167		Hinge block weldment AHW-025	1
8	201201062		Swivel connector weldment	2
9	201401170		Push arm mounting bracket weldment	1
10	20540246	80143B	Cylinder hyd DA 3 x 10	1
11	200401422		Link 1.063D 7.188 1.313D	1
12	200401495		Mounting angle front cheek plate cross tube	4
13	200401494		Angle 3 x 3 x 3/8 – 11	4
14	281023C-V	81023C	Bolt hex 1 ¼ x 6 UNC zinc	1
15	281007B	80999D	Nut hex toplock 1 ¼ UNC zinc	1
16	281015A	81015A	Flatwasher SAE 1 ¼ zinc	1
17	20P010		Pin 1 ¼ x 4 3/8 UH	2
18	20900125		Pin 1.250 dia x 3.406 body	1
19	20P148A		Pin 1 x 3	2
20	280569A		Roll pin 3/8 x 2 ½ zinc	2
21	280507	80508A	Cotter pin ¼ x 3 zinc	1
22	3SK3807	81068E	Bolt hex ¾ x 4 UNC zinc	2
23	3SK3811		Nut hex toplock ¾” UNC zinc	2
24	3SK3756		Bolt hex 5/8 x 5 ½ UNC zinc	2
25	SK3700	81073D	Bolt hex 5/8 x 2 UNC zinc	4
26	3SK3699		Bolt hex 5/8 x 1 ¾ UNC zinc	2
27	SK3781		Nut hex toplock 5/8 UNC zinc	8
28	21429003		Tube Rd 1.550M 1.281M 1.000S	1
29	264285		Roll pin 5/16 dia x 2 lg	2

22956 HWY 61 MORLEY, MO 63767 (573)262-3545 PH (573)262-3369 FX

VIKING CIVES AHW-025 MID-MOUNT 7' TRIP EDGE WING
(PART #21401051)



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MIDMOUNT PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	21403052		7 ft mid-mount trip edge weldment	1
2	21403017		7 ft trip edge base angle	1
3	280396		Spring torsion 3 ¼ O.D. x 19 1/8 lg	2
4	280031		Blade 5/8 x 8 x 84 2” top margin	1
5	20900026		Pin 1.000 dia x 28.688 UH	2
6	2N81074C	81074C	Bolt plow 5/8 x 2 ½ UNC zinc	9
7	280556		Cotter pin ¼ x 2 zinc	2
8	SK3781		Nut hex toplock 5/8” UNC zinc	9

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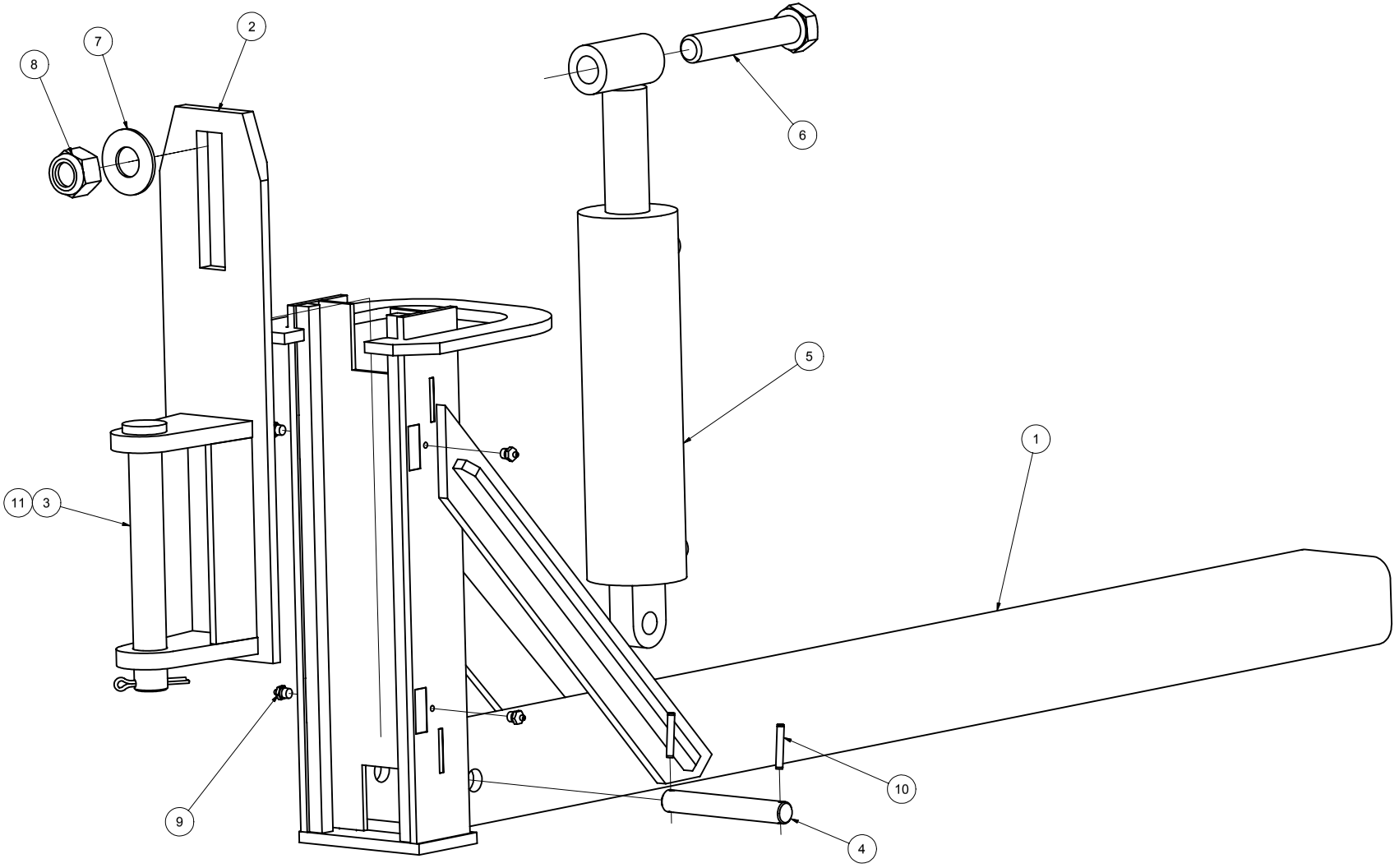
MW AHW-025 MID-MOUNT FRONT MAST ASSEMBLY
PART #201001176



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MIDMOUNT FRONT POST PARTS

Item	Drawing No	Alt. Item No.	Description	Qty
1	201001172		Wing post weldment AHW-025	1
2	201001168		Slide weldment AHW-025	1
3	20900128		Pin 1.500 dia x 11.438 Body	1
4	20900130		Pin 1.000 dia x 7.000	1
5	20540247	80143B	Cylinder hyd DA 4 x 12	1
6	281023G		Bolt hex 1 ¼ x 7 UNC zinc	1
7	81015		Flatwasher USS 1 ¼ zinc	1
8	281007B	80999D	Nut hex toplock 1 ¼ UNC zinc	1
9	260106		Grease fitting ¼ NPT STR	4
10	264285		Roll pin 5/16 dia x 2 lg	2
11	280519		Cotter pin 5/16 x 3	1

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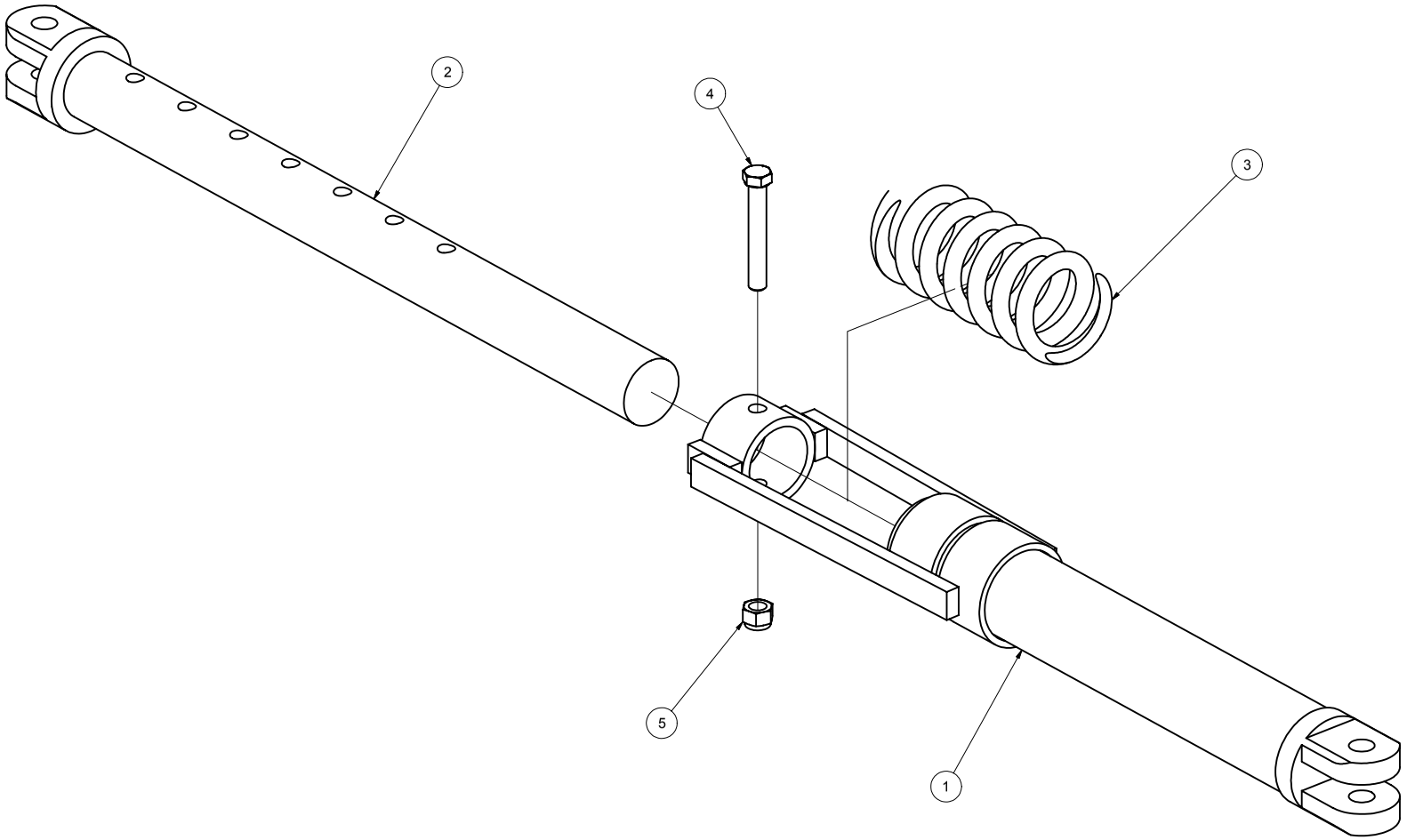
MW AHW-025 MID-MOUNT STANDOFF ARM
PART #201201065



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REAR STANDOFF ARM PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	201201064		Push arm weldment AHW-025 outer	1
2	201201060		Push arm weldment AHW-025 inner	1
3	205800032		AHW-025 push arm compression spring	1
4	213268		Bolt hex 9/16 x 3 ¾ UNC zinc	1
5	21137270		Nut hex toplock 9/16 UNC zinc	1

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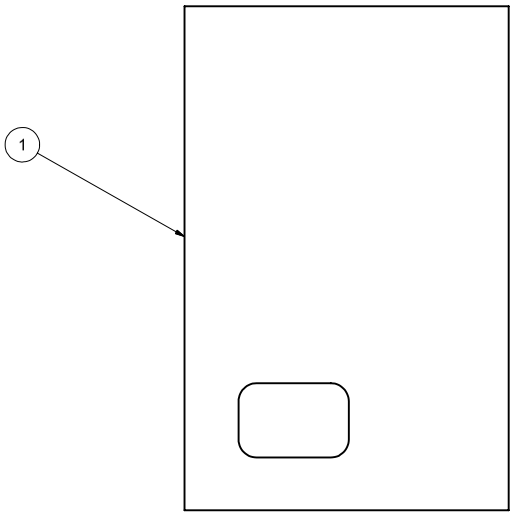
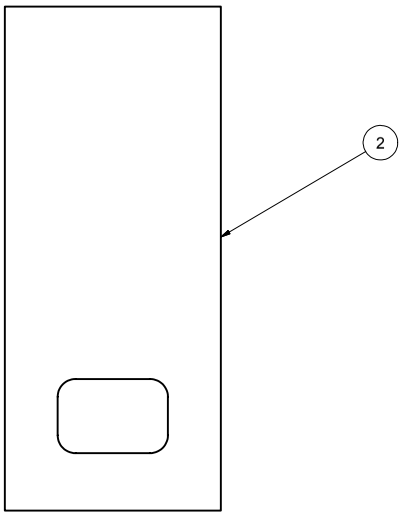
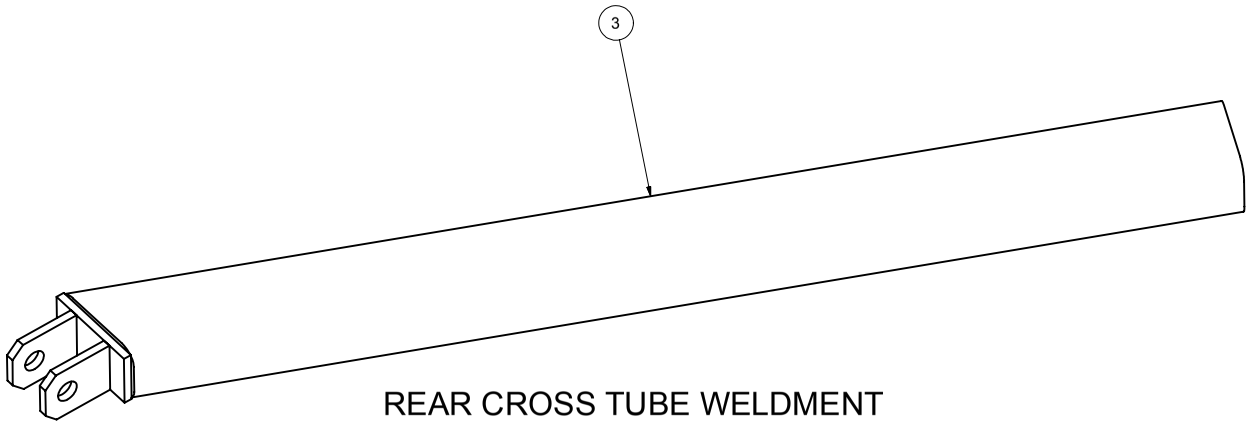


REAR CHEEK PLATE
PART #201001177



FRONT CHEEK PLATE
PART #201001170



REAR CROSS TUBE WELDMENT
PART #201001178

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REAR CROSS TUBE AND CHEEK PLATES PARTS

Item	Drawing No.	Alt. Item No.	Description	Qty
1	201001177		Plate 18.000 x 28.000 x 0.500	1
2	201001170		Plate 12.000 x 28.000 x 0.500	1
3	201001178		Rear cross tube weldment	1

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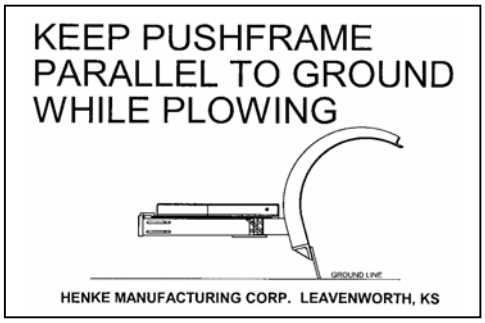
2006-2007
IDOT UNDERBODY SCRAPER

SAFETY

ONE OR MORE OF THESE SAFETY STICKERS MAY APPEAR ON YOUR HENKE PLOW. THEY ARE PLACED THERE TO INFORM YOU OF SAFETY ISSUES CONCERNING YOUR TYPE OF PLOW.
ALWAYS READ AND FOLLOW SAFETY WARNINGS. THEY ARE IMPORTANT FOR YOUR SAFETY AND THE PROPER OPERATION OF YOUR HENKE PLOW.



CAUTION !! CAUTION!!
SIDEMOUNT WING PLOW WARNINGS
1. ALWAYS USE SAFETY CHAIN WHEN TRANSPORTING WING.
2. SLIDE ASSEMBLY OR WING MAY EXTEND ABOVE CAB HEIGHT.
3. OVER-EXTENDING WING LIFT CYLINDER TO APPLY OUTBOARD DOWN PRESSURE MAY RESULT IN DAMAGE TO CYLINDER OR HARDWARE.
4. ARTICULATING GRADER WHEN WING IS IN TRANSPORT POSITION MAY DAMAGE HARDWARE.
HENKE MANUFACTURING CORP. LEAVENWORTH, KANSAS

THIS CYLINDER HAS ADJUSTABLE AND REPLACEABLE VEE GLAND PACKING. ROD SEAL LEAKS CAN OCCUR, OFTEN AFTER PERIODS OF NON-USE. FIELD ADJUSTMENT REQUIRED.
USE WRENCH TO TIGHTEN GLAND NUT ONE-QUARTER TURN, THEN REPRESSURIZE CYLINDER. IF LEAKING PERSISTS, CONTINUE TO TIGHTEN, USING ONE-QUARTER TURN ADJUSTMENTS ONLY.
DO NOT OVERTIGHTEN, AS VEE GLAND PACKING MAY BE PERMANENTLY DAMAGED.
REPLACEMENT KITS ARE AVAILABLE.

1. **PERSONS WHO INSTALL, MOUNT, OPERATE OR SERVICE THIS EQUIPMENT MUST BE PROPERLY INSTRUCTED AND WARNED. DO NOT LET ANYONE OPERATE EQUIPMENT WITHOUT PROPER INSTRUCTION.**

2. **READ DECAL INSTRUCTIONS, CAUTIONS, AND WARNINGS. READ THE SAFETY MESSAGES IN THIS MANUAL AND REPLACE MISSING OR DAMAGED SAFETY DECALS.**

3. **UNAUTHORIZED MODIFICATIONS TO THE SNOWPLOW AND RELATED COMPONENTS MAY IMPAIR THE FUNCTION AND/OR SAFETY.**

IN SEASON MAINTENANCE

Snow removal equipment must be cared for and maintained regularly. Daily or pre-route inspection and maintenance are necessary. Failure to do so may affect efficiency and safety.

A visual inspection must be carried out after every 8 hours of operation. Look for damaged components, bends, cracked welds or hydraulic leaks. **REPAIR IMMEDIATELY!** It is recommended to re-torque all bolts after the first 8 hours of use and to regularly check for loosened or missing fasteners. Replace any damaged or missing fasteners immediately.

Because of the environment in which snow equipment is expected to operate, hydraulic lines, fasteners, wearable or replaceable items and warning decals may become damaged by snow, ice and road debris. These items must be inspected daily and replaced if necessary to avoid equipment damage or personal injury.

Lubrication of moving parts is of the utmost importance. Exposure to snow, ice, salt and road debris will wash away lubrication quickly and it may be necessary to inspect and reapply lubrication more than once a day.

Introduction

Thank you for your purchase of a Henke Model UBS XH Extra Heavy Underbody Scraper. The Henke UBS XH is a heavy duty, durable unit which will provide years of service with a minimum of maintenance. The Henke UBS XH is designed for dirt and gravel road maintenance, and for removal of snow and hard packed ice, by medium and heavy duty trucks.

To ensure safety and ease of installation, it is very important that this manual be read in its entirety prior to installation or operation.

The entire Henke XH unit ships assembled, so that it can be conveniently mounted to the existing truck chassis. Mounting hardware, extra stop blocks, downpressure relief valve, and crossover relief valve are shipped unattached in a separate package.

Installation

1. If necessary, remove the circle hanger assemblies (Item 4, Figure 2) temporarily to fit the unit under the truck.

2. Determine whether shims are required to make the distance between the circle hanger assemblies (Item 4, Figure 2) match the distance between the outside of the truck frame rails. The unit is shipped with two shims installed on each side (Item 8, Figure 2), providing a width of 34.5". Remove shims from one side to get to 34.25" width, or remove shims from both sides to get to 34" width.

3. Position the unit under the truck chassis **as shown in Figure 1.** Any obstructions which prevent mounting or proper operation of the unit must be relocated. **It is critical that the UBS is level and the proper distance from the ground – See Figure 1.**

4. Drill one 25/32" hole (saving room for a second hole later) through each mounting leg and the truck frame behind to achieve the proper positioning. Loosely bolt the four mounting legs to the chassis using (4) 7020255 ¾-10 x 2.5" Gr. 8 bolts, (8) 7040021 ¾ flat washers, and (4) 7030030 ¾ Gr. C toplock nuts to secure the unit in the proper position. **NOTE: Do not do any additional drilling or bolting until the entire unit is squared and the reversing swing of the moldboard is checked.** With the unit properly positioned, tighten the four bolts sufficiently to hold the unit in place for testing.

5. Connect the separate reversing and actuating hydraulic systems to the hydraulic system of the truck. The DXV-10-1000psi Crossover Relief Valve

must be properly plumbed into the reversing hydraulic system, and the JL-10-500psi Downpressure Relief Valve must be properly plumbed into the actuating hydraulic system.

6. Carefully activate the reversing cylinders and check to see that the UBS XH, when fully angled in either direction, does not strike the tires or any other part of the truck. The unit is shipped with two stop blocks installed on the circle to prevent damage to the hydraulic cylinders. Two additional stop blocks are shipped loose, and must be installed to limit moldboard reversing swing if the UBS XH strikes any part of the truck when reversing. Note: The angle of the actuating canisters (Item 11, Figure 2) changes when the moldboard is actuated. If the canisters come close to striking any part of the truck, the moldboard should be partially actuated (but **not** touching the ground) and the unit should be reversed again to check for obstructions. **Never attempt to reverse the moldboard with the cutting edge touching the ground.**

7. If additional stop blocks are required to limit travel, reverse the unit one way and stop it a safe distance before it hits the obstruction, then tack the stop block in place on the circle in the proper location. Ensure that the 3" side of the stop block fully contacts the end of the circle clamp or wear pad (Item 5 or 6, Figure 2). Repeat this procedure in the opposite reversing direction, if necessary, using the second stop block. Fully weld the stop blocks in place on three sides, leaving the contact side unwelded.

8. Using the reversing cylinders, position the moldboard 90° to the truck frame. Cautiously activate the moldboard actuating cylinders, moving the moldboard from raised to plowing position. The moldboard cutting edge should touch the ground before the actuating cylinder rods are fully extended. Ensure that the cutting edge strikes the ground evenly. If the cutting edge does not strike the ground evenly, with the ground flat and level and the moldboard reversed 90° to the truck frame, it may be necessary to adjust the bolting location of the circle hanger assemblies on the truck frame.

9. With the unit properly positioned and the first four 3/4" bolts fully tightened, drill four additional holes and install four more 3/4" bolts through the circle hanger legs into the truck frame. (A total of eight 3/4 bolts should now be holding the UBS XH to the truck frame, two through each hanger leg). Torque all eight toplock nuts to 170 foot-lbs., alternating between legs.

10. Ensure that all bolts are fully torqued, and that all 9 grease fittings have been greased (fittings are greased before they leave the factory but should be double-checked).

Operation

1. The reversing cylinders should never be operated while the moldboard is in plowing position. **THE MOLDBOARD MUST BE IN A RAISED POSITION WHEN REVERSING.**

2. The reversing cylinders and structure are protected by a DXV-10 Crossover Relief Valve factory preset to 1000 psi. Exceeding this 1000 psi relief pressure may cause damage to the unit and/or the vehicle and result in a serious safety problem. **THE DXV-10-1000psi CROSSOVER RELIEF VALVE MUST BE INSTALLED AND FUNCTIONING PROPERLY AS PART OF THE HYDRAULIC REVERSING SYSTEM.**

3. The actuating cylinders and structure are protected by two heavy duty shock spring assemblies and a JL-10 Downpressure Relief Valve factory preset to 500 psi. Exceeding this 500 psi maximum operating pressure may cause the shock springs to fully compress and fail to provide adequate protection when an obstacle is encountered. This may cause damage to the unit and/or the vehicle and result in a serious safety problem. **THE JL-10-500psi DOWNPRESSURE RELIEF VALVE MUST BE INSTALLED AND FUNCTIONING PROPERLY AS PART OF THE HYDRAULIC ACTUATING SYSTEM.**

4. **FAILURE TO OBSERVE ITEMS (1), (2), AND (3) ABOVE WILL VOID ALL WARRANTIES AND ABSOLVE HENKE OF ANY CLAIMS.**

5. All 9 grease fittings should be greased on a regular basis.

6. All fasteners should be checked for tightness and retorqued as necessary after the first hour of operation and every eight hours of operation thereafter.

MINIMUM MOUNTING DISTANCES				
MOLDBOARD LENGTH	REV. ANGLE	A	B	C
10 FT. MOLDBOARD	35°	92"	33"	33"
	40°	99"	36"	36"
	45°	102"	38"	38"
11 FT. MOLDBOARD	35°	98"	36"	36"
	40°	106"	40"	40"
	45°	112"	42"	42"
12 FT. MOLDBOARD	35°	106"	40"	40"
	40°	114"	44"	44"
	45°	118"	46"	46"

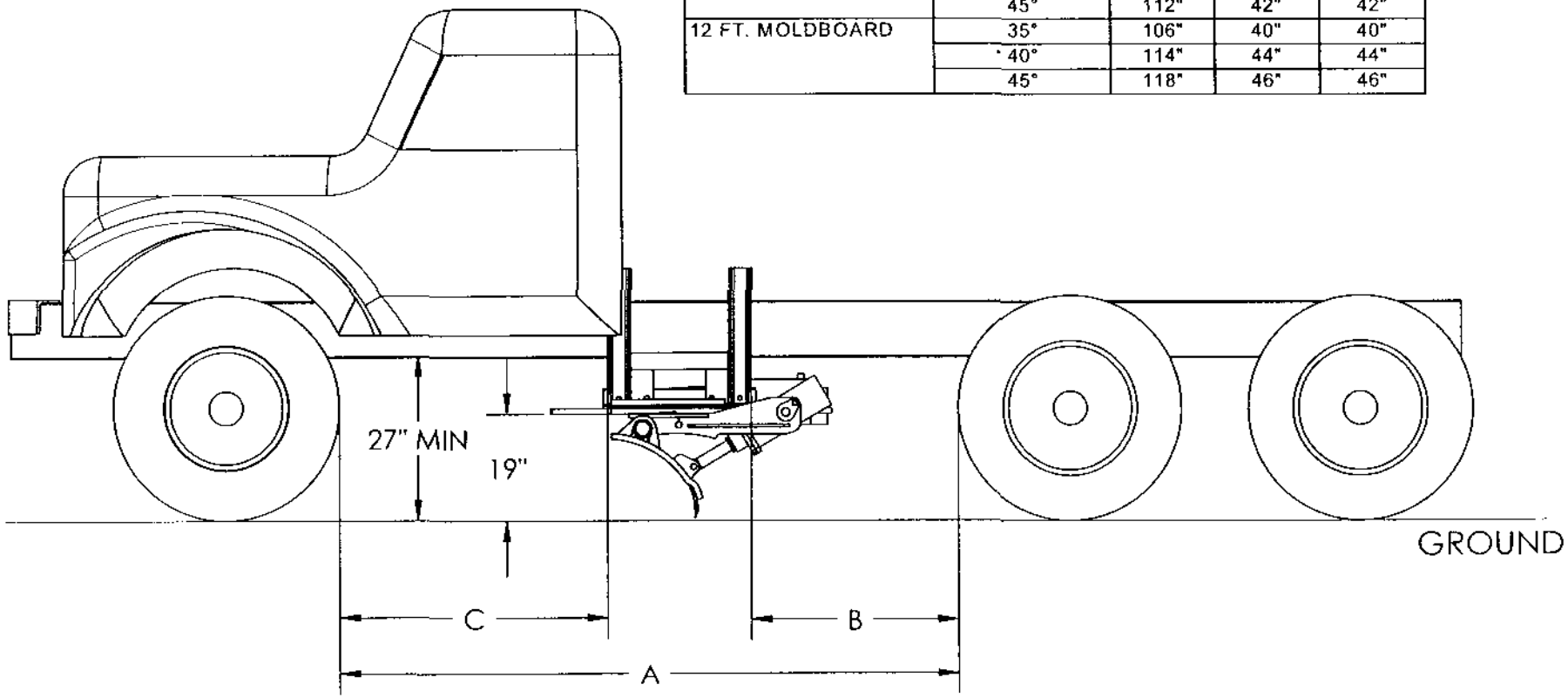


FIGURE 1 - TRUCK SIDE VIEW, UBS XH

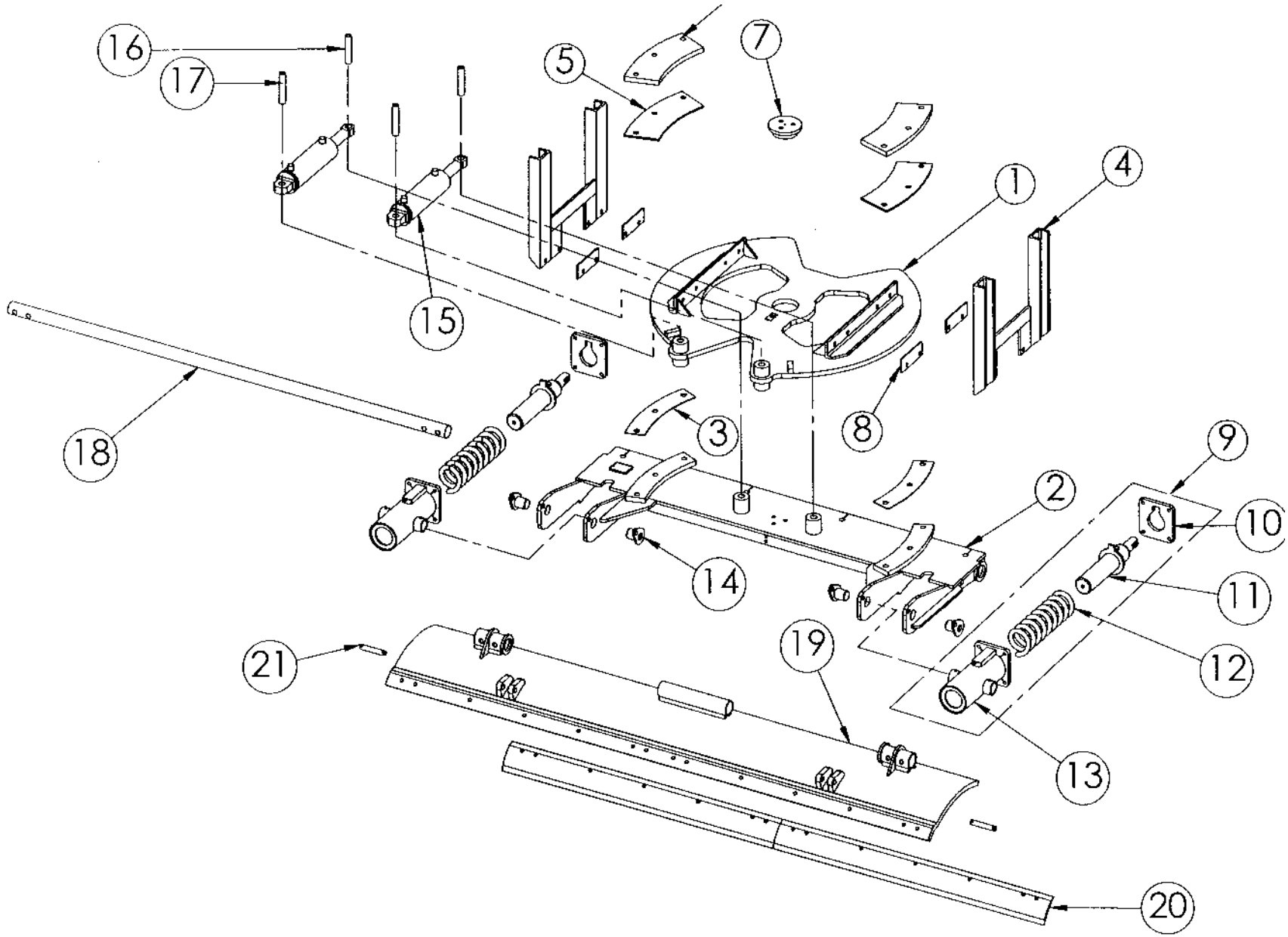


FIGURE 2 - UBS XH EXPLODED VIEW

TABLE 1 - PARTS LIST FOR UBS XH EXPLODED VIEW

Ref. No.	Henke Part No.	Quantity	Description
1	3600-A0068	1	Circle Assembly, Standard
2	3600-A0062	1	Hangerboard Assembly
3	3600-0073	2	Circle Shim
4	3600-A0015 or 3600-0020	2 2	Circle Hanger Assembly, Channel (shown) or Circle Hanger Plate (not shown)
5	7300027	2	Poly Wear Pad
6	3600-0021	2	Circle Clamp - Top
7	3600-0081	1	5" Dia. Greaseable Center Pin
8	3600-0075	4	Mounting Shims
9	3600-A0010	2	Actuating Canister Assembly (Includes Items 10 through 13)
10	3600-0036	2	Shock Spring Cap Plate
11	7080266	2	Actuating Cylinder, 3 x 10 x 2
12	7070067	2	Actuating Cylinder Shock Spring
13	3600-A0009	2	Shock Spring Housing Assembly
14	3600-A0065	4	Keeper Pin
15	7080326	2	Reversing Cylinder, 4 x 11 x 2
16	3600-0111	2	Bushing, Rev. Cyl. to Hangerboard (5.97")
17	3600-0059	2	Bushing, Rev. Cyl. to Circle (6.56")
18	3600-0011	1	Hinge Shaft
19	3600-A0067 or 3600-A0066 or 3600-A0063	1 1 1	Moldboard Assembly 20", 1" thick x 10' or Moldboard Assembly 20", 1" thick x 11' or Moldboard Assembly 20", 1" thick x 12'
20	7150095 and/or 7150096	2 total	Cutting Edge, 1/2 x 6 x 72" and/or Cutting Edge, 1/2 x 6 x 60"
21	2100-0715	2	Actuating Cylinder Ear Pin

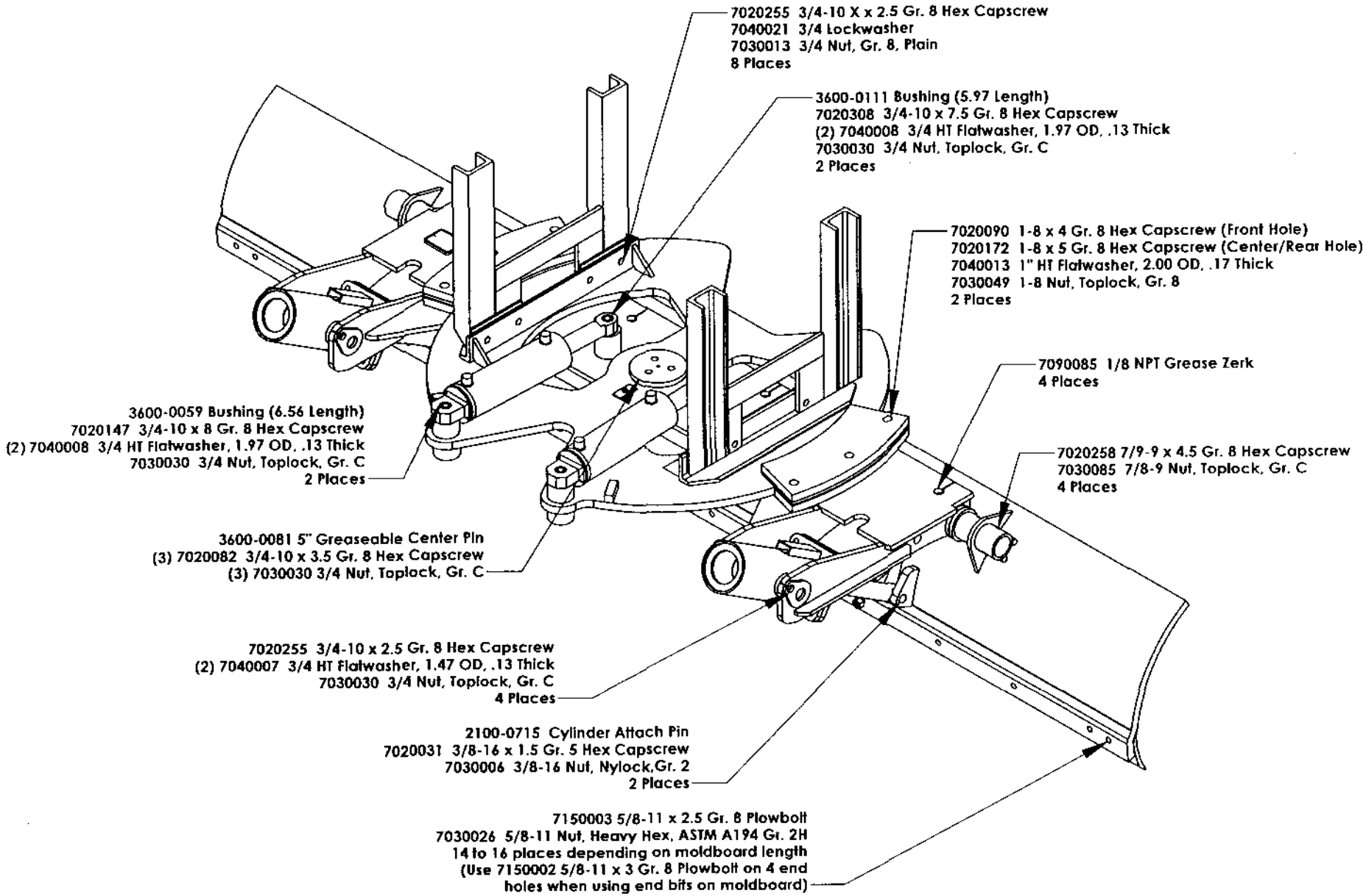

7020255 3/4-10 X x 2.5 Gr. 8 Hex Capscrew
7040021 3/4 Lockwasher
7030013 3/4 Nut, Gr. 8, Plain
8 Places
3600-0111 Bushing (5.97 Length)
7020308 3/4-10 x 7.5 Gr. 8 Hex Capscrew
(2) 7040008 3/4 HT Flatwasher, 1.97 OD, .13 Thick
7030030 3/4 Nut, Toplock, Gr. C
2 Places
7020090 1-8 x 4 Gr. 8 Hex Capscrew (Front Hole)
7020172 1-8 x 5 Gr. 8 Hex Capscrew (Center/Rear Hole)
7040013 1" HT Flatwasher, 2.00 OD, .17 Thick
7030049 1-8 Nut, Toplock, Gr. 8
2 Places
7090085 1/8 NPT Grease Zerk
4 Places
3600-0059 Bushing (6.56 Length)
7020147 3/4-10 x 8 Gr. 8 Hex Capscrew
(2) 7040008 3/4 HT Flatwasher, 1.97 OD, .13 Thick
7030030 3/4 Nut, Toplock, Gr. C
2 Places
7020258 7/9-9 x 4.5 Gr. 8 Hex Capscrew
7030085 7/8-9 Nut, Toplock, Gr. C
4 Places
3600-0081 5" Greaseable Center Pin
(3) 7020082 3/4-10 x 3.5 Gr. 8 Hex Capscrew
(3) 7030030 3/4 Nut, Toplock, Gr. C
7020255 3/4-10 x 2.5 Gr. 8 Hex Capscrew
(2) 7040007 3/4 HT Flatwasher, 1.47 OD, .13 Thick
7030030 3/4 Nut, Toplock, Gr. C
4 Places
2100-0715 Cylinder Attach Pin
7020031 3/8-16 x 1.5 Gr. 5 Hex Capscrew
7030006 3/8-16 Nut, Nylock,Gr. 2
2 Places
7150003 5/8-11 x 2.5 Gr. 8 Plowbolt
7030026 5/8-11 Nut, Heavy Hex, ASTM A194 Gr. 2H
14 to 16 places depending on moldboard length
(Use 7150002 5/8-11 x 3 Gr. 8 Plowbolt on 4 end
holes when using end bits on moldboard)

FIGURE 3 - UBS XH FASTENERS

TABLE 2 - COMPONENTS - HYDRAULIC REVERSING SYSTEM

Henke Part No.	Quantity	Description
7080326	2	Reversing Cylinder, 4 x 11 x 2"
7080308	1	DXV-10-1000psi Crossover Relief Valve (Factory Preset)
7110405	2	Hydraulic Hose Assy., 1/2 2-wire x 38", -8 JIC F e/e
7090257	2	Elbow, 90°, -08 JIC F to –8 ORB Adj. M
7090385	2	Tee, -08 JIC M, -8 ORB Adj. M Branch
7090009	2	Cap Nut, -08 JIC M
7090428	1	Hose Clamp Pair, Polypropylene
7090429	1	Hose Clamp Cover Plate
7020277	1	Bolt, 5/16-18 x 1.75", Zinc Plated

TABLE 3 - COMPONENTS - HYDRAULIC ACTUATING SYSTEM

Henke Part No.	Quantity	Description
7080266	2	Actuating Cylinder, 3 x 10 x 2"
7080267	1	JL-10-500psi Downpressure Relief Valve (Factory Preset)
7110406	2	Hydraulic Hose Assy., 3/8 1-wire x 67", -6 JIC F e/e
7110407	2	Hydraulic Hose Assy., 3/8 1-wire x 50.5", -6 JIC F e/e
7090276	4	Adapter, -06 NPT Male to -06 JIC Male-
7090379	2	Tee, -06 JIC M, -6 JIC M Bulkhead Branch, with locknut
7090380	2	Cap Nut, -06 JIC
7090416	2	Hose Clamp Pair, Polypropylene
7090417	2	Hose Clamp Cover Plate
7020011	2	Hex Capscrew, 5/16-18 x 1.25 Gr. 2 Zinc Plated (for hose clamps)
7090447	2	Clamp, 7/8" ID, Vinyl-Coated Steel, Bolt-On
7210016	4	Cable Tie, .30 x 8", Nylon, UV Back
	2	Nylon Sleeve, Protec NHS-090, Cut to 24" Length

TABLE 4 - UNASSEMBLED PARTS PACKED SEPARATELY

Henke Part No.	Quantity	Description
3600-0068	2	Stop Block
7080424	1	DXV-10-1000psi Crossover Relief Valve (Factory Preset)
7080338	1	JL-10-500psi Downpressure Relief Valve (Factory Preset)
7020255	8	Hex Capscrew, 3/4-10 x 2.5, Grade 8
7030030	8	Toplock Nut, 3/4-10
7040007	16	Flatwashwer, ¾

Henke Standard Warranty Policy

Henke Manufacturing Corporation(HMC) warrants its products against defects in material and workmanship for a period of 12 months from date of delivery.

HMC, at its option will repair or replace any parts or components found to be defective in materials or workmanship.

Defects will be determined through photos provided by dealer or user, or through physical inspection of returned parts. Parts are to be returned freight prepaid when requested to HMC, labeled with a returned goods authorization number.

Authorization for warranty repair will be faxed to the reporting dealer, and will include labor hours that HMC agrees to credit the dealer, and the Return Goods Authorization Number, if applicable. Credit amounts for agreed labor hours will not exceed 70% of dealer shop selling rate. Mileage, travel time, overtime, or any incidental costs will not be included in warranty consideration. Credits will apply to current or future business with HMC.

This warranty does not include normal wear items such as cutting edges, wear guards, scarifier teeth, etc. Repairs required as a result of misapplication, accidental damage, improper maintenance, improper installation, or negligence are also not covered by warranty.

HMC warranty for any purchased components, such as hydraulic cylinders will be superceded by, and equal to the component manufacturer warranty.

SELLER IS NOT, UNDER ANY CIRCUMSTANCE, LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DEALER WARRANTY PROCEDURE

For units delivered within the past 12 months, report any warranty problems needing repair to our Product support department. Have information ready regarding:

1. Henke unit model and serial number,
2. Model of equipment Henke unit is attached to (prime mover)
3. Description of the problem and any helpful information by the end user. (Photos are always helpful).

Measurements or photos may be requested by Henke engineering for any issues regarding prime mover proximity and clearance, or any other unique considerations of fit and adaptability. These may be necessary for a proper repair recommendation and procedure.

Henke will respond with a written labor hour allowance for Henke participation on a faxed claim form and will ship any required replacement parts. If necessary, a repair procedure will be included on the claim form. A parts invoice will be generated to confirm shipment of the replacement parts.

If defective parts are needed for analysis, Henke will request their return.
Any such returned items are to be labeled with the **claim number** and returned to:

Henke Manufacturing Corp
ATTN:Product support
3070 Wilson Av
Leavenworth, Ks. 66048
RGA#_____

The dealer should perform repairs as agreed on a dealer warranty repair order.
Return the claim form with a copy of the dealer warranty repair order and service report.
Credit as agreed will be issued to the dealer upon receipt of the dealer warranty repair order invoice (Pro-forma invoice), and upon receipt, inspection and warranty confirmation of the returned parts if any.

Parts & Service Assistance

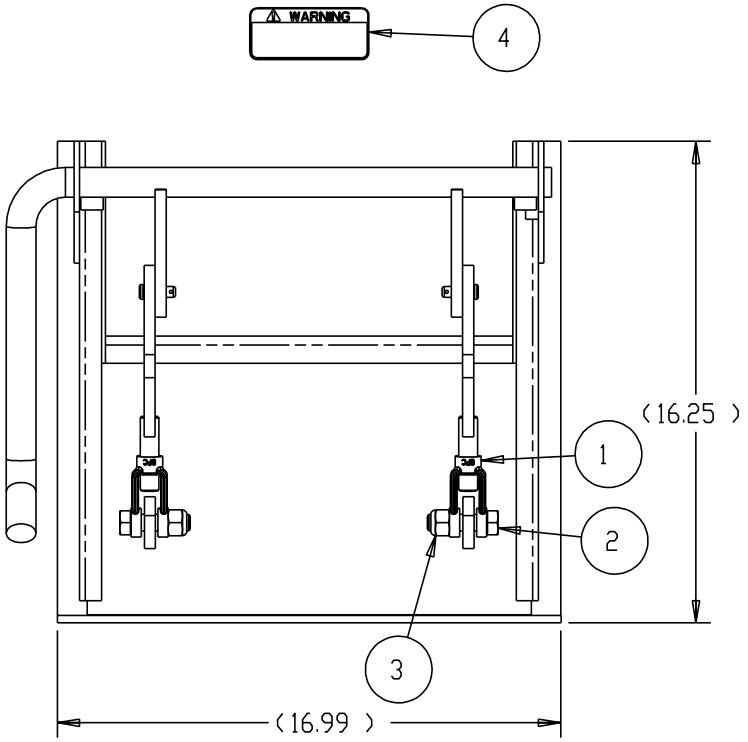
Parts and service assistance is available between the hours of **8:00 AM and 5:00 PM**, Central time, Monday through Friday. **Call 913-682-9000**.

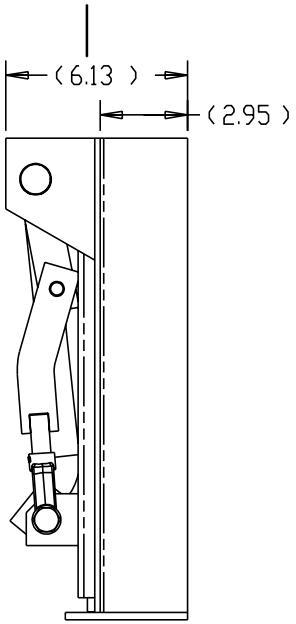
Our web site, **www.henkemfg.com**, is a quick source for parts pricing and many common parts diagrams

Parts purchase orders may be faxed in at any time to **913-682-0300**. Faxed orders are encouraged, as they help insure order accuracy and follow up. Include any special instructions, such as drop ship addresses on your order.

DOOR CHUTE

DWG. NO. CCD0714D_ SH 1





SERVICE PARTS			
ITEM	PART NO.	QTY.	DESCRIPTION
1	B27087FZ562	2	CLEVIS, INSPECTION DOOR, YELLOW ZINC
2	FCS056012200	2	SCREW, HH CAP 9/16-12 X 2" ZN
3	FNE056012200	2	NUT, NYLON LOCKING 9/16-12, ZN
4	3008050	1	DECAL,WARNING, INSPECTION DOOR, 1-3/4" X 4"

MATERIAL
SEE DETAILS
-

NAME TMB DATE 23SEP05
CHK DATE
APP DATE

ALL SHEETS ARE THE SAME REVISION STATUS

THIS ITEM IS A PROPRIETARY ITEM OF BUYERS PRODUCTS CO. AND REPRODUCTION OR USE THEREOF IN ANY MANNER WHATSOEVER IS UNAUTHORIZED EXCEPT WITH THE EXPRESS WRITTEN CONSENT OF BUYERS PRODUCTS CO. ANY USE DETRIMENTAL IN ANY WAY TO THE INTERESTS OF BUYERS PRODUCTS CO. IS EXPRESSLY PROHIBITED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.X ± .1 ∠ ±1°
.XX ± .03
.XXX ± .010
INTERPRET DIM AND TOL PER ASME Y14.5M

Buyers PRODUCTS COMPANY
PHONE (440) 974-8888
9049 TYLER BLVD. MENTOR, OH 44060
FAX (440) 974-0165

TITLE
DOOR, INSPECTION, DRIVER'S SIDE

SIZE	CAGE CODE	DWG. NO.	REV
B	-	CCD0714D_	F

SCALE 0.25 WEIGHT - SHEET 1 of 1